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Original Articles.

MENTAL HYGIENE IN ITS RELATION TO PRESENT-DAY NURSING.*

BY L. VERNON BRIGGS, M.D., BOSTON.

Director of Massachusetts Society of Mental Hygiene; Member of the American Congress of Internal Medicine; Member New England Society of Psychiatry; Member of Société Medico-Psychologique de Paris; Member American Psychiatric Association; Member Société Clinique de Médecine mentale, of Paris, etc., etc.

You have asked me to address your Massachusetts State Nurses' Association on the subject of "Mental Hygiene in Its Relation to Present-Day Nursing Problems." I understand that your organization includes among its members superintendents of nurses and instructors in training schools throughout the State, and I feel much honored to have this opportunity to give you a brief outline of what I believe should be added to the training of nurses and to the requirements for registration, to meet present-day demands for good general nurses as well as to develop high-grade specialists in the care of mental and nervous diseases.

What confronts the sufferer from mental diseases today is: first, the difficulty of finding a physician who is educated in the care and treatment of mental sickness, and, second, the dif-

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ficulty in securing the services of a nurse who has had experience along these lines. Generally these difficulties are so great and the patient's needs are so urgent that the only avenue of escape is for the family to send him to a private sanatorium for mental diseases or to a State Hospital. And even in these special hospitals, in many of which we have skilled medical attendance, it is at present often impossible to provide adequate nursing.

It is not possible to separate mental hygiene from hygiene in general. Our mental and physical functions are so closely interwoven and so mutually interdependent that they cannot be regarded separately. The problem of nursing the mentally sick is not that of caring for the frankly insane (as they are still erroneously called), nor for the feeble-minded; not the nursing of raving maniacs or imbeciles, but of the care of large groups of individuals whose physical symptoms find their origin in poor mental adaptation, in personality defects in the patient or in factors in the environment in which the patient lives; or whose mental peculiarities are due to subtle toxic conditions which can only be determined by the psychiatrist through the constant observation of highly trained and intelligent nurses. Where is there a nurse who would refuse to take a case of typhoid fever, of puerperal conditions, of chronic interstitial nephritis with mental disturbance, and yet these disturbances do not differ materially from those of the so-called

*Read before the Mid-Winter Meeting of the Massachusetts State Nurses' Association, February 18, 1922, at New England Women's Club Room, 585 Boylston Street, Boston.

insane, whom the same nurse would probably decline as patients. This attitude is not to be wondered at, for as Thom very aptly reminds us, it is only a few years—perhaps ten—that psychiatry has been associated with general medicine. But now we meet with conditions requiring mental nursing not only in the special hospitals for mental diseases and in the community, but in its general hospitals, in the industrial field and in the schools, where nurses skilled in mental hygiene are to take their place in the field of preventive medicine.

There are two things I want to impress upon you. First, I want to disassociate the idea of training in mental nursing from that of the care of the so-called insane or "crazy" people—that is an infinitesimal part of your work as a nurse. It has been said that the brain is like a good piano badly played upon. Mental disturbance requiring the most skilled nursing may often be the result, not of a defective or diseased brain, but of disease of some particular organ of the body, forming toxins which, in the circulation, play upon the brain and produce mental symptoms. Second, to have mental nursing one of the required subjects in your training would not mean that you were to be relegated to State Hospitals. It would only mean that you were to get there a part of your training, to enable you to better take care of mental disturbance, no matter in what form it might appear.

Few people, even among the medical profession, have any idea of the prevalence of mental and nervous diseases. Do you realize that in Massachusetts, in the year 1920, one out of every twenty adults who died in the entire State, died in a State Hospital for mental diseases? and twice as many enter and leave the hospital as remain to die there! This means that one out of every ten of our adult population is at some time during his life, a patient in a hospital for mental and nervous diseases. And this is not taking into account the unrecognized cases, the neglected cases and the cases receiving treatment in their own homes! How many of these deaths from mental disease might have been prevented by early recognition and intelligent nursing? Certainly, training in mental nursing is proportionately more important than training in obstetrical or surgical nursing. And yet not one general hospital training school in the State requires any training in the care of mental cases.

The situation in the State at the present time in this branch of work is deplorable. It is with great difficulty that a physician can obtain the services of a nurse trained in the care of the mentally sick. The difficulty is so serious that many patients are sent to State Hospitals who might be nursed in their own homes away from surroundings suggesting mental ill-

ness. Why is this so? The usual answer made by the nurse is: "They are difficult cases. Why should we take them when we already have more than we can do with the medical and surgical cases?" That is not really the reason. I do not believe that nurses train for their profession to the end that they may pick and choose the easy or agreeable cases. To be sure, nurses now specialize in surgical work, in obstetrical work, or typhoid, or tuberculosis cases, but that is after they have received their general training and have registered. The undergraduate does not prepare specially for any one branch of nursing any more than the undergraduate physician devotes himself to a single specialty. It is not possible for either of them to know whether they are going to be more efficient in one branch of the service than in another until they have had the general training upon which all the rest is based. All specialties are interdependent. Now what is most regrettable is the fact that most training schools for nurses do not require the study of the care of mental and nervous diseases, but leave these subjects entirely out of their curricula. The nurses, therefore, not only lose the opportunity to find out whether they are specially adapted to this important and profitable branch of the service and would like to choose it for a life work, but they are deprived of what should be an important part of their training for general nursing, and a large class of patients are left without the service which all nurses should be able to give. For one of the strongest reasons for including mental hygiene in the education of nurses is that it would be of value to every nurse to be able to apply the principles of the care of mental and nervous cases to her every-day patients. There is scarcely a patient to whom a nurse is called today who has not an element of mental or nervous instability, especially when mind and body are weakened. A lack of education along these lines makes the case much more difficult for the average nurse. Society is like a complicated machine made up of millions of parts, and the members of society with mental troubles are defective parts of that machine which prevent its working smoothly. But they cannot be scrapped like the defective parts of a machine merely because they clog the social machinery, for they are human beings. They generally feel themselves to be out of adjustment, and suffer accordingly, for by the law of our nature, we can only be happy when we are filling our normal place in the scheme of things. The intelligent nurse helps to repair these defective units that they may be replaced in that part of the social machine where they are best able to function.

It is a great satisfaction to help bring the unsettled mind back to normal, and requires a

much higher training than to assist in the cure of physical ills. The mind is more interesting than the body to study, to treat and to nurse.

A nurse thoroughly trained in mental health work in all its branches has one of the greatest opportunities for service that can be given to anyone, opportunities which may be extended into the families and homes of her patients and into the community at large. The day is not far distant when she will become a teacher of mental health in the family and in the community. It is the nurse who, in a great measure, will be responsible for starting the child on the road to mental stability, and the training which a nurse can give to a child from birth, and especially during its school life, may make success or failure when that child enters society and has to face the obstacles and competition of adult life.

Education in mental health, in addition to enabling the nurse to understand and handle her patients much better than she would otherwise be able to do, would also enable her better to handle herself in the presence of nervous and apparently unreasonable patients. Few nurses today know enough of mental hygiene to conserve their own nervous energies by taking proper care of themselves so that they are not unnecessarily irritated and fatigued by these trying cases whose behavior in illness varies from the normal standard. These conditions a nurse with a suitable training in mental hygiene should meet successfully and cheerfully. Those who have had this training have a storehouse of reserve force which they may call upon under the most trying circumstances. The lack of mental training is a real neglect in the nurse's education and shows a want of appreciation of the needs of the patient and of the nurse herself, as well as of the trend of the ideals for which she is working.

The nursing in our mental hospitals today is gradually improving but it is still far from satisfactory. Recently, in addressing a committee, I made a statement that we should have a higher grade of nurses in our State Hospitals for the mentally ill; that, as a whole they were not up to the standard of general nurses, though I stated that among them were many who were well-trained and efficient, and whose services were invaluable. No words can express the appreciation and gratitude of the patients and of their families and friends for what these devoted women are doing. It is to be hoped that the time is not far distant when their associates will be given equal training to theirs and that the highly specialized and often most interesting work in our mental hospitals will be done by nurses, trained or in training, who are equally faithful and intelligent. But I added in my statement to the committee that we have many so-called nurses and attendants in mental hospitals who are ignorant, lazy, and

stupid—a floating population of low-grade individuals, who know little and care less about the scientific nursing and humane care of these mentally ill people. This remark of mine was somewhat misquoted in the newspapers, and I was criticized by one of the leading members of your profession for having attempted to overthrow the morale of the nursing schools in the State Hospitals, which are struggling against long odds to establish high ideals, without much support or encouragement from the nursing profession in general. This critic has not appreciated the fact that I was attempting to enlist the support of this committee for constructive measures to raise the standard of nursing and better educate the student who has chosen to devote her life to the amelioration of suffering.

There was no higher call during the war—there is no higher call today in time of peace—than that of the nursing profession. But this is a call to help all who are ill or suffering. There is no class of patients who can be benefited more by tactful and intelligent nursing than the mentally ill, for a large portion of mentally nervous disorders are curable, and all can be benefited by proper care and treatment. There is no class of patients for whom the physician alone can do so little and the nurse so much—where, in many instances, the doctor is helpless without the nurse. No two cases are alike—few can be early classified—and the call for quick decision, tact and initiative on the part of the nurse is much greater than for any other type of disease.

There is no class of patients so large today as that of the mentally ill—mental diseases call for more nurses than all other diseases put together, for there are more beds for mental patients in the hospitals of the United States today than there are in all our general medical and surgical hospitals added together. So have not we, who are working in the cause of the mentally ill, a right to ask that nurses be educated in the care and treatment of nervous and mental patients as well as of other patients, and has not the nurse who gives several years of her professional training, a right to demand that her education be rounded out and completed, that she may take her place with these patients as well as with those suffering from other ills?

The demand for nurses with psychiatric training is more than doubling each year. If nurses are not given this training how are we to supply the demands of the industrial plants, the hospitals, the courts, the charitable organizations, the schools and the community? Every public school requires a nurse with psychiatric training, and the demand is always likely to be greater than the supply. Indeed, so great is the necessity for a better understanding of mental problems in the schools that it is safe

to say that we must go farther and not only demand that school nurses have psychiatric training, but we shall very soon also require that our teachers shall have some knowledge of psychiatry and mental health, and include these subjects as a part of the curriculum of every normal school and college. The number of students who break down under the present courses of study is alarming. It is well for the nurse to understand one or two of the causes which play an important part in the breaking down of our present-day society: I will mention two that have been pointed out by two great men. First, the great Italian, Bianchi, emphasizes, among other things, the stabilizing effect of work on the mind and deplores the prevailing conception that the fewer hours we have to work, the better off we are. He says, "This is the view which politicians and labor leaders—to promote their own selfish interests—are impressing the public. The result is that the shortening of the hours of labor, instead of giving leisure for home duties and family life, is deteriorating character and mental health, as the free hours are devoted to loafing. "Work," he says, "the great stabilizer of the nervous system, is abhorred and shirked more and more—a sad perversion of the ideal aimed at in the early agitation for the eight-hour day."

The great French authority, Pierre Janet, says the present-day society has another factor to contend with which results in the breaking down of many minds and the resort to alcohol, drugs, etc. He says, "I have already had occasion to point out in this connection, a type of mental overwork that is typical of the age in which we live. The philosophic ideas in regard to the quality of man have brought to a common level, the ambitions of all classes. They have subjected all minds, no matter what the caliber, to efforts that our fathers never thought of making in the same manner." A dramatic author once said: "Several generations are required to make a minister out of a janitor's son."

If we could make the social struggle less severe; if we could check the desire to attain social position too rapidly, and if we could discourage dangerous ambitions, could we not unite what now seem irreconcilable: freedom of thought and tranquillity of beliefs? These are great questions and more closely linked to the problem of alcoholism, and also that of race suicide, than is commonly supposed.

The dictum that "All men are equal," a mistranslation of the "right of all men to an equal opportunity," on which our democracy is based leads many to strive to compete much beyond their mental and physical strength. The result of instilling this idea that all are equal to shouldering responsibility or reaching equal heights into the minds of those who are not

stable, who are not gifted with the power to compete with their fellows is that they are forced to the front and encouraged to take positions and responsibility they never should take. They fall by the wayside one after the other, some sooner, some later, and many of the patients today in the hospitals are the victims of this application of the democratic idea. They have believed that all men are equal mentally and physically, only to find too late that they have limitations which should have been recognized early in their lives. And here is another field for the properly educated nurse, who has daily contact with the unstable child or adult, and who should be able intelligently to size up their limitations, and at least in the case of the child, help him to avoid the fatal result of too great ambition, and later the assumption of too great responsibilities.

The difficulty in interesting nurses to take training in mental health is due, in the first place, to prejudice—to the prejudices of the nurses themselves and the community at large—against these unfortunates. This prejudice dates back to the dark ages when the mentally afflicted were supposed to be possessed by evil spirits and were tied to the pillars of the churches and whipped by the priests—whipped to drive the devils out of them. It was this tradition which later led to the abuse of the mentally ill in their homes and in institutions, for whipping had been allowed by the churches and the towns also were permitted to chain these poor unfortunates in the almshouses and prisons—so why should not the ignorant attendants punish and maltreat them? Even in comparatively recent times, these people have been treated, not as patients, but as dangerous malefactors, relegated to almshouses and prisons, where they could do no harm—with no thought of the harm that was being done them. That prejudice, itself based on superstition, prevailed all over the world, and its influence is still felt by the nurses of today. And why not? Has stress been laid during the training of these nurses upon the fact that the brain is only one of the many organs of the body which can become diseased the same as the liver or lungs or kidneys? Have they been told that diseases of the brain are the same in medical and nursing care as diseases of any of the other organs of the body? The brain is the most highly developed organ of the body and its diseases call for the most scientific nursing. The study of the care of mental illness requires a higher intelligence and education than of tuberculosis of the lungs or disease of the kidneys, etc., because we have in the brain not only a possible physical condition in a very complex organ, but a psychic condition. Those who treat these cases must understand not only the organic brain, but its functions—its variations from normal and its susceptibility to environment. A

large portion of cases of so-called brain disease show no sign of disease at autopsy. It is in this large group of cases that the study of the individual and his environment rather than of the brain must be made, and the treatment and care directed accordingly. Psychiatry is such a deeply interesting study that once a physician really enters the realm of mental medicine he rarely leaves it for any other branch. In fact, I know of no man who has ever left the practice of psychiatry for any other specialty after having gone into it deeply enough to understand what it means. I believe it would be the same with the nurse, and that if the nurses should voluntarily make the study of mental nursing a part of their curriculum, or if it should come to be a required subject, many would be found who would choose it for their life work, because the field is so tremendous and so interesting, and they can accomplish so much good.

There is one important point which must not be forgotten in speaking of the desirability of education of nurses in mental health work, and that is the benefit to the thousands of patients in our State Hospitals—State Hospitals for mental diseases today, but State Hospitals for Mental Health tomorrow. These hospitals are greatly in need of nurses with skill and scientific training, and their training schools will undoubtedly develop to meet the demand which is bound to come for training affiliates from the general hospital training schools as well as the demand for post-graduate courses for registered nurses.

The whole number of nurses and attendants employed in the ward service of our State Hospitals wholly in the Department of Mental Diseases for the year ending November 30, 1921, was 1464.76, an increase of 211.67 over the previous year. There were 72 graduates only in this group. There were 3.61 rotations in this group compared with 4.18 rotations the previous year, and the average length of the interval between rotations was 3.35 months, as compared with 2.90 months the previous year. The affiliations in our State Hospitals are as follows:

Nurses Graduated in

Institution.	1921.	Affiliations.
Worcester Hospital	13	Boston City Hospital
Taunton Hospital	13	12 months' service at Boston City Hospital
Northampton Hospital	5	12 months' course at State Infirmary, embracing surgery, diseases of children, obstetrics and gynecology
Danvers Hospital	6	Bellevue and Allied Hospitals
Westborough Hospital	4	Mass. Homoeopathic Hospital, one year's instruction in surgical, gynecological, obstetric, and pediatric nursing

Institution.	1921.	Affiliations.
Boston Hospital	17	Boston City Hospital, 12 months' training in contagious diseases, obstetrics, operating room technique, general medical and surgical
Psychopathic Hospital	0	No training school
Grafton Hospital	9	Boston City Hospital
Medfield Hospital	4	(female) Bellevue and Allied Hospitals
Gardner Colony	0	
Monson Hospital	1	Bellevue and Allied Hospitals
Foxborough Hospital	0	No training school
Massachusetts School for Feeble-Minded	0	" " "
Wrentham School	0	" " "
Bridgewater Hospital	0	" " "
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While the foregoing table represents the affiliations, one must not be led to believe that the affiliation is mutual. For not one of these general hospitals sent to the State Hospitals, to which they are affiliated, any pupils.

A second reason why we find it difficult to get good nurses for mental cases is that the education of the physicians themselves has until recently, been neglected. It is only within the last year that psychiatry has been made a required subject in Massachusetts medical colleges, and a law has been passed making it obligatory, beginning in 1923, for all physicians to pass an examination in psychiatry before they can register to practice in the State. It is no wonder that physicians have done so little in mental medicine when they have not been trained to recognize mental diseases, and they have naturally not expected their nurses to understand mental nursing. Now that psychiatry is an important part of the physician's training, the younger men, at any rate, will be demanding nurses competent to look after their patients. It is a part of a program for preventive medicine.

Another important part of the program to meet present-day medical needs is that, as physicians are obliged to pass an examination in psychiatry, so nurses must qualify in psychiatric nursing before they can register to practice in the State. This training would give the nurse a better chance to deal successfully with her cases, mental and physical. It would make her one of the "sentinels of mental health," as Donald Laird puts it, and help to afford an opportunity for psychiatrists, who now concentrate their efforts upon institutional cases, to turn their attention to the community and become real hygienists.

The physicians, newly awakened to the importance of mental disease, and especially the young general practitioner who has himself been trained in psychiatry, will demand that his nurse shall at least know how to observe and report early mental symptoms, and care for

incipient cases of mental disease, often preventing their further development. This is a very important branch of mental hygiene, and no one has a larger part to play in it than the well trained general nurse, if she has the vision to rise to the occasion and be prepared to meet the call which is already becoming more and more urgent. The future development of mental hygiene, not only in private practice but in public health work in the school, in industrial medicine, and in the community, is assured. Is the nursing profession ready to rise to this demand, or will it be necessary to create a new profession to meet it? If the leaders among our nurses demand both undergraduate training in psychiatric nursing for all general nurses and post-graduate training for teachers and specialists, there is little doubt that the hospitals will meet them half way and furnish it.

I believe that an exchange affiliation of the General Hospitals with the State Hospitals would be of great mutual benefit, furnishing in both general and mental hospitals more intelligent nursing care. In the State Hospitals it would be the greatest encouragement to the faithful and efficient nurses now on duty. Our fourteen State Hospitals graduated in the year 1920 only 72 pupils out of an average daily ward service of about 1465.75, including nurses and attendants. These State Hospitals have some affiliations with General Hospitals, but the general hospitals send no pupils in exchange for those who go to them for training in obstetrics, etc. It is a crime and a blot on our civilization that patients in mental hospitals have not long ago been placed on the same basis of medical care and nursing as patients in our general hospitals. When the history of the State Hospitals is finally written, an intelligent community will wonder how the present staffs of medical men and nurses have accomplished so much in the care and treatment of the patients, handicapped as they have been. They certainly should be awarded distinguished service medals for having held the fort for so many years before the arrival of reinforcements.

I have permission from the Rockefeller Foundation to tell you that in a report on "The Education of Nurses in this Country," which they are soon to publish, they recommend that all nurses shall have a course in mental hygiene, including at least three months in hospitals for mental diseases allied to general hospitals, before they receive their diplomas. This is a great step, and unless I am mistaken, no recommendation made by the Rockefeller Foundation along the lines of medical work or improvement has failed to be favorably acted upon.

SUMMARY.

1. Psychiatry is no longer confined to asylums, prisons, almshouses. It is now one of the foremost problems of social and preventive medicine and is playing its part in educational, industrial, judicial and military organization.

2. Mental illness does not mean so-called insanity. Mental symptoms are frequently part of the picture in typhoid fever, puerperal conditions, auto-intoxication, and results of poisonous substances taken from without into the body.

3. Psychiatry and psychiatric nursing deal with the individual as a whole rather than with some particular organ.

4. The final analysis in every case, whether it be medical, surgical, obstetrical or what not, has a mental aspect which needs to be taken into consideration: (a) The suicides of chronic invalids. (b) The marked depression seen in cardiac and nephritic cases. (c) The exaltation of the hyperthyroid cases, also seen frequently in tuberculosis. (d) The delirium of typhoid fever. (e) The confusion and mental deterioration seen in brain tumors. (f) The hallucinations seen in toxic conditions. These are all part of the picture produced by the inevitable mixture of mental and physical conditions.

5. The mental atmosphere of the home can be best studied by the nurse. It is she who comes into most intimate contact not only with the patient and the immediate members of the family, but frequently she acquires a most intimate knowledge of the patient's personal life, including his worries, anxieties and the problems which he has to meet. With training pertaining to mental health of patients, the nurse can render reports which would be invaluable to the physician or surgeon in his task of making differential diagnoses. Hysteria, for example, may assimilate any symptom from the category of medicine, and it is only after a long period of observation by one who is familiar with mental reactions, that these symptoms can be intelligently interpreted.

6. I do not appeal to you to enter the field of neuropsychiatric nursing on the basis of any altruistic motives nor do I hold out at this time, any economic advantages which might result by entering this field. Rather would I lay stress on the fact that it is your duty as members of one of the noblest of professions to neglect no opportunity to determine for yourselves whether or not you have a special interest and leaning toward psychiatric nursing, and you are also deprived of the reward and the satisfaction that comes from success in nursing a damaged personality back to health and happiness.

PYEOGRAPHY: PRELIMINARY REPORT.

BY OSWALD S. LOWSLEY, M.D., NEW YORK.

SHORTLY after the perfection of methods to view the inside of the bladder and to pass catheters into the ureters, urologists began to use opaque substances in conjunction with the x-ray to outline the kidney pelvis. The first solutions used were the colloidal silver salts. Collargol was the favorite of these. Urologists had not been using this chemical long before they appreciated the fact that there were certain definite unfavorable reactions following its use. This led to animal experimentation by Keyes which definitely showed that the collargol was apparently absorbed and redeposited under the capsule of the kidney. It then became the site of inflammatory reaction which in many cases was of a serious nature.

Argyrol, another colloidal salt of silver, was used in the same way and with the same result although not so marked. The pictures obtained by using argyrol were not nearly so clear as the collargol pictures. Many attempts were then made to introduce other substances, chief among which were argentide introduced by Young of Boston, and thorium citrate proposed by Burns of Baltimore. This latter group of substances was not so harmful as the first group mentioned but did, however, give rise to very considerable local and general reaction which sometimes assumed serious proportions.

At this time in the development of pyelography, urologists became chary about injecting both kidneys at the same time and used the gravity method of introduction so as not to over-distend the kidney pelvis. Later Braash of Rochester, Minn., introduced sodium bromide which was found to give quite satisfactory pictures with the x-ray and which did not result in nearly so many local or general reactions following its use. In the meantime, at the clinic in the New York Hospital sodium iodide became general in its use and we found clinically that the local and general reactions were not nearly so numerous as with any of the other solutions that had been tried. It was also observed that the pictures with sodium iodide were much clearer and better in every regard than those produced by the use of sodium bromide.

Upon reviewing the literature it was discovered that some years ago the use of sodium iodide had been advocated and an extensive and important research was written on the subject by Cameron. This work had been overlooked by most urologists.

In the past two years we have done more than five hundred pyelographies and of these cases there were only seven that had elevations of temperature, although most of the patients

suffered slightly for a few hours from the dis-tention of the kidney pelvis.

Having noted that the temperature reactions and the discomfort of the patients were less after the use of sodium iodide we decided to do some experimental work to determine which chemicals were most suitable for pyelographic work.

Beef kidneys were donated to this department by Wilson & Company. The following substances were injected into them after which an x-ray was made to determine the opaqueness of the substance used:

1. Sodium salicylate.
2. Iron pyrophosphate.
3. Potassium citrate.
4. Ammonium bromide.
5. Potassium iodide.
6. Sodium bromide.
7. Sodium iodide.

A number of other chemicals were used but they did not cast sufficient shadow to be of im-portance in this experiment.

RABBIT EXPERIMENTS.

Rabbits were used as the medium for determining the amount of irritability to the renal epithelium caused by the various drugs. It is our practice to anesthetize the rabbit with ether, expose both kidneys through a lumbar incision, removing one kidney for a control and injecting the other kidney pelvis with the material chosen until the kidney is seen to expand under pressure. This is easily accomplished by inserting a hypodermic needle through the wall of the ureter which is sufficiently large to allow of this procedure. The first three drugs—sodium salicylate, iron pyrophosphate and potassium citrate—were found to be somewhat irritating and did not cast a sufficiently good shadow to be of any considerable importance. Ammonium bromide gave a most excellent shadow but caused complete necrosis of the kidney into which it was injected. Potassium iodide was found to be exceedingly irritating. Sodium iodide and sodium bromide gave the most satisfactory pictures with the least amount of irritation, with the balance very decidedly in favor of sodium iodide.

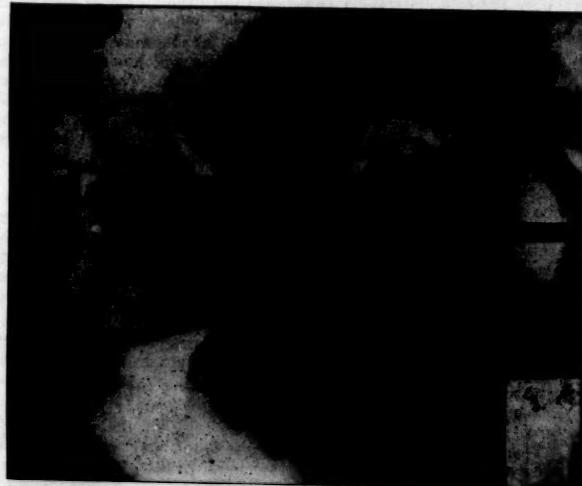
Note: These rabbit experiments will be quoted at length in a further communication.

The following is our method of procedure in doing a pyelogram:

The interior of the bladder is viewed with the cystoscope and any abnormalities existing are noted. Lead catheters are then passed into the ureters, to the kidney pelvis, if possible. Specimens collected are preserved for chemical, microscopical and bacteriological examination. A kidney functional test (phenol-sulphone-



Normal Kidney Pelvis on Each Side Showing Beautiful Flower-like Calyces.



Stricture of Ureter (Pelvic Portion).

phthalein) is then performed, after which the radiographer takes two pictures, one of the kidney and upper ureter, the other of the bladder and lower ureter before any opaque substance is introduced. If stone in the ureter is suspected, a double exposure plate is taken after the method of Kretschmer. By following this method a stone in the ureter will be in apposition to the lead catheter and then the x-ray tube is moved laterally. If there is a stone in the ureter it will move with the catheter. If the shadow is cast by an object above or behind the ureter, it will not be in exact apposition to the catheter in the second picture, due to the change in angle. Then the opaque material is introduced under gentle pressure until the patient states that a sense of fullness is felt in the back. This is done simultaneously on each side and as soon as the sense of fullness, above mentioned, is noted, the injection stops and the picture is taken immediately, both of the kidney and the upper ureter and of the bladder and lower ureter.

After this has been done, the patient is placed in the sitting posture with a plate so placed that its middle is at the crest of the ilium, and therefore the entire course of the ureter, a portion of the bladder, and the entire kidney are included in the picture. Then the x-ray catheters are slowly withdrawn, sodium iodide being injected into the ureter during the process. When the ureter catheter has been withdrawn to a point just within the ureter orifice, the picture is taken, and in this way any abnormality in the contour of the ureter or the position of the kidney will be brought out, as is splendidly shown in some of our pictures.

As soon as the picture is taken, the catheters are reintroduced a slight distance and the sodium iodide drained off. The instrument and catheters are then removed.

Most of our patients complain of a considerable amount of pain for a few minutes, which may extend into several hours in certain cases, but in only seven cases have we had elevations of temperature above 100 since we have been using sodium iodide as a medium for pyelography. The two photographs show the results obtained by this method.

THE IMPORTANCE OF EARLY OPERATION IN CONGENITAL UMBILICAL HERNIA.

BY LEIGH F. WATSON, M.D., CHICAGO.

In small congenital umbilical hernia, the outlook is fairly good if the condition is recognized early, the operation undertaken while the sac is still moist, and before the hernia has been increased in size by the taking of fluid into the stomach. Unless the hernia can be reduced,

and the opening closed by operation, the prognosis is very grave. Resection of viscera and incomplete closure of the defect is usually followed by death. Infants with large congenital hernia are often stillborn, or die soon after birth. If other viscera besides the intestine are in the sac the infant has a small chance of surviving operative treatment. Infants with small congenital hernia are usually born alive, and the most favorable results have followed when operation has been performed during the first few hours after birth. The mortality is about 20 per cent.

The treatment of congenital umbilical hernia may be either mechanical or operative.

Small congenital umbilical hernias can sometimes be cured by palliative measures, which consist in keeping the parts clean and dry, and using a bland dusting powder or ointment. Pressure on the tumor is maintained by wide adhesive straps passing entirely around the abdomen. These can be most effectively applied if the child is suspended by his feet while they are put on. In this position he does not cry, there is no increase in intra-abdominal tension, and the hernia is easily reduced. When the skin becomes irritated from the straps, they should be temporarily replaced by a firm binder or elastic belt.

The operative treatment offers the best chance for a permanent cure in all patients in whom it can be used. Large hernias or evaginations, in which the viscera are irreducible and there is no chance of closing the opening, are inoperable. A few cases are on record in which the herniated liver has been successfully reduced and the opening closed (Telsemeick, Reuter, Mitchell, Suttner, Allen, Maounoury, Range, and Baum). Stewart saw a case in which the liver was so firmly adherent to the fundus of the sac that reduction was impossible. Benedikt reduced the spleen successfully and Landreher reduced the stomach.

The earlier the operation is undertaken, the more chance there is for recovery. Le Jemtel operated half an hour after the child was born; Maran within one hour; Dunlop and Phenomenoff operated an hour after the child was born, and MacDonald's patient was six hours old. In a study of 72 cases collected in the literature by Adler, where operation was undertaken in the first 24 hours, the mortality was 12 per cent., while after 48 hours it was 66 per cent.

The two methods of operation are the extra-peritoneal and intraperitoneal.

The extraperitoneal operation is the one most frequently used because it produces the least shock and gives the lower mortality. The amnion and Wharton's jelly are separated from the underlying peritoneal layer of the sac, without opening the abdominal cavity. The edges of the hernial opening are freshened on both sides, the sac folded over and sewed in

place, and the muscle and skin edges brought together over it with strong sutures. The tendency of the wound to pull apart is lessened by applying firm adhesive straps around the body.

The intraperitoneal operation is used when, for any reason, it is necessary to open the abdomen to examine the viscera or to deal with peritonitis. If there is difficulty in reducing the liver, it usually can be accomplished by incising the linea alba to widen the opening, and by dividing the round ligament of the liver.

TREATMENT OF ASTHMA AND ASSOCIATED DISEASES IN CHILDREN.*

BY ALLAN R. CUNNINGHAM, M.D., BOSTON.

[From the Children's Clinic of the Boston Dispensary.]

By "asthma and associated diseases," I mean asthma, asthmatic bronchitis, and such miscellaneous conditions as may accidentally give rise to similar symptoms. The term "asthma" is one which is hard to define when applied to children, this difficulty being due to the fact that in young children, and especially in infants, bronchitis frequently produces clinical symptoms suggestive of asthma. Also bronchitis, beginning in infancy, or later, not infrequently becomes recurrent, may disappear spontaneously with age, or may be continued into the asthma of adult life. Of 38 patients questioned, 16 began in infancy.

As a means of differentiating asthma the percentage of eosinophiles was determined in 12 cases, only two of whom were at the time in the course of what might be termed an "attack." In none of these was the percentage increased. It is doubtful if eosinophilia can be considered of value in the differential diagnosis. Curshman's spirals are not often found in the asthma of children.

As allergy is accepted as a cause of a considerable group of asthma cases it would not be surprising if the term asthma became limited by practice to such as are of this nature.

The frequency with which allergy occurs as a real cause is shown as follows: Thirty-six patients were tested with pure proteins from the Arlington Chemical Co.; from twenty-seven to forty-five tests were made upon each patient, and all the tests were cutaneous. Eleven gave distinctly positive reactions to one or more proteins, with the formation of wheals at the point of inoculation. But the association of these proteins with the asthma could be confirmed in only six by the disappearance of symptoms when withheld, and one of these required, fur-

thermore, the use of vaccines before symptoms were entirely relieved. Thus about 17 per cent. of 36 cases were without much doubt due to allergy.

Of the six, two were due to cat-hair, one to wheat, one to raw egg and wheat, one to several kinds of fish, and one to chicken-feather. One other of the eleven has not yet had the proper treatment. He gives a strong reaction to dander.

Treatment is most successful when the offending protein is entirely avoided. If this is accomplished many patients show a strong tendency to lose their hypersensitive condition. Immunization is successful in some cases, but during the process it is as important to avoid accidental contact as by the first mentioned scheme. There are two methods of producing artificial immunity; one by subcutaneous injection at intervals of about 5 days,—the other by increasing doses by mouth. As suggested by others, immunization by mouth is the method of choice in young children, because it is so much less disturbing to them. The greatest value of immunization is in cases sensitive to epidermal substances, such as cat-hair or horse-dander, but milk and egg cases can also be treated in this way. Owing to the frequent spontaneous loss of the hypersensitive condition by avoiding contact with the offending protein, it does not seem desirable or profitable to attempt to immunize except possibly against milk, but if the spontaneous loss of the hypersensitive condition does not occur in two or three months then immunization may properly be attempted.

Since the number of allergic cases in this series is rather lower than other observers have reported, it may be that some of the cases not reacting might do so were more tests made. It is also possible that this group might be increased by the use of the more delicate intradermal tests. It does not seem that the dermal method should be followed exclusively even though its results seem considerably more reliable. It appears that many authors favor the intradermal method in all their tests, and it is admitted that occasional cases, which are allergic in nature, do not give positive dermal reactions. On the other hand are the cases occasionally reported of shock following intradermal tests.

In instances where positive reactions are not followed by improvement after avoiding the reacting proteins, any one of three interpretations may be made; first, that the protein has nothing to do with the asthma; second, that it is the real cause but has not been completely avoided; third, that it is only one of several causes, being associated, for example, with a secondary bacterial infection.

For patients not so improved autogenous vaccines were made from sputum and 20 patients were treated at intervals of about 5 days. These

*Read before the New England Pediatric Society, April 24, 1922.

patients received for a final dose anywhere from 200 to 400 million. The last dose should contain at least 400 million. Some had more than one culture and two or more courses of vaccine. The injections began with 50 million and were increased by this amount at each visit. Of these 20 a cure or very marked improvement took place in 7, or 35 per cent., thus demonstrating that such treatment is of considerable importance.

For those treated, who did not improve, several explanations exist; first, some were not treated persistently enough; second, bacteria may not have been the cause either wholly or partially; third, they may have been partly the cause and improvement depended upon some other undiscovered factors; fourth, the vaccine may not have contained the right organism; fifth, the offending bacteria may have been of types not readily producing immune reactions.

Cases of asthmatic bronchitis due to bacteria, if unimproved by the intensive use of vaccine, may be greatly benefited or permanently cured by a change of climate, either permanent or temporary. If the stay is to be temporary all symptoms should have been absent for a month, at least, before the patient is permitted to return to his home. But even a short absence sometimes seems to give sufficient stimulus to the healing impulse. Improvement may not be immediate; patients should expect that two or three attacks may occur at the new residence and should not be allowed to give up this means of treatment on that account. Five of our patients were boarded out by the Social Service with the general directions that the place chosen should be inland and subject to a less humid atmosphere than Boston. They went to Wrentham, Barre, and Sharon, Mass., and to Redding, Conn., and to New Hampshire. Four are now well and one has been much improved.

Fifteen cases in all, which were probably due to bacteria, are now either well, or, in two cases, practically so; seven from autogenous vaccines, four by change of residence, and four by spontaneous improvement.

A third group consists of those who have asthmatic symptoms from miscellaneous causes. These have to be weeded out by a very careful study of the history and a thorough physical or laboratory examination. They can then be treated, either with or without success, according to the nature of each, but at least with the correct diagnosis. This group is represented by six cases; one of hypothyroidism, one of debility, and myocardial weakness due to puberty, two in whom the neurotic factor was well established, one due to disease of the tonsils, and one to disease of the maxillary antrum. All are free from symptoms except for the two neurotics

These are sons of an epileptic mother and become asthmatic only during fits of temper. The case of hypothyroidism complained of asthma, constipation, nervousness and irritability, and her skin was of coarse texture. The principal ground for making this diagnosis was the result of giving thyroid, all symptoms, therupon, disappearing very promptly. There was a recurrence of them upon omission of the tablets and upon substituting pituitary gland tablets. She has now been well for several months.

The case diagnosed as debility and myocardial weakness due to puberty, showed asthmatic symptoms only after exercise. The diagnosis was borne out by the rapid heart action and her general appearance. Digitalis and graduated exercise, by rope-skipping, was followed by a disappearance of all symptoms.

One patient was cured by tonsillectomy apparently, and one by drainage of a diseased antrum, a condition which showed no localizing symptoms of its own.

There were 33 patients with whom a fairly complete course of treatment was carried out: 24 in all were relieved by treatment or spontaneous recovery; 9 were not definitely relieved. Partial records from 10 others are quoted from.

CHOLESTEATOMA OF THE TEMPORAL BONE, WITH THE REPORT OF AN UNUSUAL CASE.

BY JEANNETTE M. SHEPPARD, M.D., FALL RIVER, MASS.
Otolaryngologist, Union Hospital.

CHOLESTEATOMA of the ear has been known to pathologists since the writings of Virchow and Rokitansky, but there is still a great difference of opinion in regard to the etiology, except that they are accumulations of epidermis. Troitzsch regards them as retention tumors. Bezold considers them the result of the ingrowth of the epidermis of the external ear through a perforation of the membrane into the tympanic cavity. Leutert distinguishes a real tumefaction and cholesteatoma brought about by the implantation of the remnants of the tympanic membrane which are covered with epidermis (Politzer). It is claimed that cholesteatoma may be primary or secondary, but from the report of cases, primary occurrences are very rare compared with secondary accumulations. There has been some question as to whether these tumors embedding the petrous portion of the bone and penetrating the tympanic cavity do so during their growth or whether they originate in the middle ear and wear away the bone through constant pressure.

Lucas reported a case of primary cholesteatoma, in which the growth originated in the mucous membrane of the tympanic cavity, and

in which there was no symptom of suppurative inflammation, nor was there a perforation of the membrane. Erdheim has also reported similar cases of primary cholesteatoma, but far the vast majority of cases reported show that the formation of these tumors is secondary; especially is this true in cholesteatoma of the mastoid antrum and cells.

"With perforation of the pars flaccidi the invasion takes place more easily because of the more highly developed band of cutis and epidermis extending from the superior wall of the meatus to the membrana tympani. In other words, a more extensive growth of epidermis is found in this part than in other parts of the meatus (Politzer)."

These growths may attain a considerable size without showing any sign of necrosis or absorption of the bone, and often one may find, in addition to sclerosis, defects and excavations in the bone. In fact, the necrosis may be so marked as to leave bare the dura, lateral sinus and semicircular canals. These changes in the bone are produced partly by the continuous pressure of the mass and partly by the atrophy of the bone which is associated with the pathologic condition in the lining membrane of the middle ear. In the case I have to report, the tympanic cavity, the mastoid process, and part of the squamous portion of the temporal bone were converted into one common irregular cavity.

The patient was a woman twenty-five years of age, Portuguese, a housekeeper, married, four children, the last one seven weeks old. She was referred by her family physician who said she had a discharging ear and a facial paralysis. On examination of the left ear I found it contained a large polyp and a slightly purulent exudate. The polyp was about the size of a bean and appeared to come from a perforation in the superior portion of the drum. This was difficult to determine exactly because of the size of the growth. She said the ear had been discharging about seven weeks and her only complaint was "too much headache." There was but little nausea, slight nystagmus, and vertigo. Both of the latter were increased by induction. Careful questioning brought forth the fact that she had had a discharging ear when a child, and slight pain since, but not enough so that she had ever complained to her husband, to whom she had been married six years, and he did not know she had ever had any previous trouble.

The polyp was removed by the use of an ear snare, revealing a large perforation of the drum. The removal of the polyp did not leave a clean opening, that is, there seemed to be something back of it. A probe could not be introduced through it without pressure but came in contact with a fibrinous, pulpy substance, which did not bleed, and could not be cleared away with a

curette. She was advised to enter the hospital for a mastoid operation and to this she consented.

Operation.—Usual skin incision was made, the bone bared, but on attempting to use the chisel and mallet, as is the usual procedure in removing the cortex of the mastoid bone, the bone was found to be so soft and friable that the mallet could not be used; in fact, the whole cortex broke away as easily as an eggshell, and the chisel was not used in removing any part of the bone. It was simply picked away with the curette and rongeur. On removing this thin layer of bone there was revealed a white, shining substance, pulpy in texture, and resembling very much the appearance of a Bermuda onion. This proved to be an extremely large cholesteatoma, about the size of a small hen's egg, and broken down and soft in the center. The walls of the tumor were dissected from the cavity, which occupied the tympanic cavity, the whole mastoid process, part of the squamous portion of the temporal bone and dipped deeply into the posterior cerebellar fossa, converting all this area into one enormous cavity. The inner wall of the cranium over the lateral sinus was eroded and the growth adhered directly to the sinus for about one-half by three-quarters of an inch in area. Just above this space the bone was again eroded, baring the dura for one-half by three-quarters of an inch. This necrosis also occurred over the semicircular canals, and the facial ridge, although there was no evidence of a fistula. The growth dissected very freely from its posterior and middle portion well forward into the regions of the Eustachian tube. Here the substance of the mass became soft and ragged, but detached readily under a dull curette, leaving the bony surface clean and smooth.

The question now was how to cover such a largely exposed bone and prevent regrowth of the cholesteatoma. At the beginning of the operation the flap of periosteum had been carefully separated from both skin and bone and left free except posteriorly. This flap was tucked firmly into the posterior portion of the cavity and as far anteriorly as possible. A flap was formed from the posterior portion of the external canal and stitched to this periosteal flap and both were held snugly in place by gauze dressings. A small opening was left postauricularly and inferiorly for drainage.

The patient was in the hospital two weeks. Two days after operation the facial paralysis, which had been extremely marked, had disappeared and the headache gone, as were also the nystagmus and vertigo.

The usual dressing continued. Eight weeks after the operation the discharge had ceased and at this writing six months after operation, there had been no return of symptoms, the ear is dry and no evidence of cholesteatoma.

From the history of this case it is very evident that cholesteatoma of the temporal bone may exist over a long period of time with slight if any symptoms. This woman had worked in the mill before and after her marriage, only being absent from work during the periods of childbirth. How long she had had this cholesteatoma is of course impossible to say, but a week or two before the present ear symptoms came on she had quite a severe attack of grippe, sore throat, and a head cold, to which she attributed the facial paralysis and headache; and it was indeed difficult to convince either her or her husband that the ear had anything to do with it. The presence of the inflammatory condition of the throat and nose probably set up a like condition in the Eustachian tube and middle ear which brought about the swelling of the epidermic mass and led to the increased pressure which brought about her headache, paralysis, etc.

Similar cases are somewhat rare in literature, the striking feature of this case being the extensive absorption which must have gone along over a long period of time and short duration of symptoms. Politzer says that the prognosis of these cases depends on the location, the extent of the growth and the changes present in the ear. Cases are exceedingly rare in which a permanent cure is obtained after spontaneous expulsion of the mass or after conservative treatment. In many cases cure is not obtained until the middle ear spaces have been laid open by operative measure, and even this is not always successful. Bezold says relapses are most surely prevented when the cavity containing the mass is very large and exposed to the external atmosphere through a wide opening in the meatus or mastoid process.

124 Franklin Street.



Medical Progress.

THE PROGRESS OF NEUROLOGY.

BY ABRAHAM MYERSON, M.D., BOSTON.

PROGRESS in neurology in the late years has been definite though not in any sense startling or sensational. The war gave much impetus to the importance of this subject, since a very large percentage of the casualties were neuro-psychiatric. In the field of the organic diseases there has become evident a drift which is encouraging in that there is a dethroning of the fatalistic concept known as *abiotrophy*. Gowers, the father of this idea, placed the blame of the so-called degenerative diseases (progressive muscular atrophy, multiple sclerosis, lateral sclerosis, etc.) on the congenital inability of

parts of the nervous system to withstand the wear and tear of life; they die early, so to speak, and this dying early is the disease. Of late there is a drift towards the origin of these conditions in infection, and the Wassermann test, and especially the spinal fluid examinations, have shown, for example, that syphilis may cause conditions which closely resemble true progressive muscular atrophy and true multiple sclerosis. But aside from syphilis the relationship of other infections or infective agents to multiple sclerosis, which has been especially singled out for attack, is such that at present the trend of opinion is decidedly that the histology of this disease indicates an infection rather than degeneration (Birley and Dudgeon). This opinion was freely expressed in the last meeting of the American Association for Neurological Research. Certainly, the spinal fluid findings, which are present in many cases of multiple sclerosis, increased protein content, increased number of cells, and the peculiar "paretic" gold sol curve are remarkably like the picture of inflammatory reaction.

The situation in the Parkinsonian syndrome, *paralysis agitans*, bears on this point, especially in its connection with epidemic encephalitis. It seems to have been firmly established through the work of a line of investigators, prominent among whom are Wilson and Ramsey Hunt, that the essential lesion of this latter disease is in the "paleostriatum" (that is, in the globus pallidus of the lenticular nucleus), which is an important gray structure at the base of the brain. Held to be a degenerative disease, dependent on the mystical and probably mythical *abiotrophy*, this view monopolized the field until very recently. What has shaken it are these facts: First, that there occurs occasionally with syphilis a condition resembling the Parkinsonian syndrome, and due to syphilitic involvement of the basal ganglia; second, that with epidemic encephalitis, and during the course of the disease, there is present in many cases a group of symptoms which have been called the *paralysis agitans type* with mask-like facies, tremor of the hands, and spasticity; third, and most important, it is now definitely established that a certain number of individuals "recovered" from epidemic encephalitis, develop gradually a syndrome, not to be distinguished clinically from true *paralysis agitans*.

The cause of epidemic encephalitis is still problematic, though it seems probable that the organism described by Loewe, Strauss, and Hirshfeld is responsible. These investigators have carried on a line of experiments, both in growing the organism and in the inoculation of rabbits, which, on their face, seems conclusive that a Berkefeld filterable micro-organism is responsible, and that this organism can be recovered from the scrapings of the nose during life.

Their work has been corroborated by Klinge and Davide, in Sweden, and to a certain extent by Levaditi and his group. If it becomes firmly established that this group of workers has isolated the micro-organism of epidemic encephalitis it will constitute a notable triumph for American medicine. Resembling poliomyelitis in some respects, the two diseases have been held to be one and the same by some clinicians and pathologists, but certain points of difference are evident. As Amoss especially emphasizes, anterior poliomyelitis is easily transmitted to monkeys by inoculation with the infected nervous tissue of man, whereas this has not been definitely accomplished in the case of epidemic encephalitis. Further, the immune serum of anterior poliomyelitis will neutralize the toxic substances of this disease, whereas the immune serum of epidemic encephalitis will not do this. It does not seem to the reviewer that the spinal fluid picture is the same in the two diseases. There is a stage in anterior poliomyelitis where there is a leucocytosis present in the spinal fluid. This does not seem to be the case in epidemic encephalitis, and, furthermore, the increase in cells is usually higher in poliomyelitis than in epidemic encephalitis.

The prognosis and sequelae of epidemic encephalitis are summarized by Goldman, of the Mt. Sinai Hospital, in the *Archives of Neurology and Psychiatry*, of May, 1921, as follows:

"1. Psychic functions, in some form or another, were disturbed in 55 per cent. of these patients.

2. Insomnia was present in 55 per cent. of the cases.

3. Tremor and irregular involuntary movements were found in 58 per cent. of the cases.

4. The deep reflexes were altered in 30 per cent. of the cases, and tonus in the muscles was disturbed in 18 per cent.

5. The cranial nerves showed residual signs in 64 per cent. of the cases.

6. Pupillary disturbances were found in 30 per cent. of the cases. Five patients had Argyll-Robertson pupils.

7. About 8 per cent. of the patients gave signs of progression at the time they were examined.

8. The mortality among the 145 patients admitted to the Mount Sinai Hospital was 20 per cent.

From these findings one might venture this tentative prognosis: Probably less than 20 per cent. of the patients, who become ill with epidemic encephalitis die during the acute stage of the illness, as usually only the most severe cases reach the hospital. Of those who survive the acute stage, about 10 per cent. may develop a progressive disease of central nervous system. The remainder will make a good functional recovery in from six to twenty-four

months, with the probability of progressive approach to normal after that period."

The Situation in Neuro-syphilis. The importance of this subject may be stated as follows: Syphilis ranks with tuberculosis, neoplasm, and the great plagues as a major affliction of mankind, and neuro-syphilis ranks second to no subdivision of syphilis in sinister standing. With the introduction of spinal fluid examination, and the use of Ehrlich's remedy, neuro-syphilis became both capable of diagnosis and treatment in a way hitherto impossible, and there was naturally stimulated a study of the subject that reached its height recently, and now awaits new developments for further increase. The following statements may be made as typical of the present attitude of neurology towards certain phases of neuro-syphilis: "Study of the spinal fluid should be carried out as a routine in all syphilitic patients, as an essential to intelligent treatment. Spinal puncture should be performed after the first or second course of arsphenamine, and should be repeated at least once before the patient is discharged, presumably cured. If this is done in every case of syphilis, and treatment intelligently administered according to the results obtained, the incidence of clinical neuro-syphilis may be reduced to an absolute minimum." This rather optimistic dictum is probably extreme, but it must be emphasized again and again, and then some more, that the spinal fluid may be positive when the blood is negative, and that the diagnosis of neuro-syphilis rests fundamentally, not upon blood Wassermann, but upon the spinal fluid examination, as well as clinical signs. Clinical evidence must never be disregarded for serology or spinal fluid evidence; at the same time that spinal fluid evidence is given a position of paramount importance.

Some syphilographers and neurologists believe that neuro-syphilis is on the increase. In this connection the statement is commencing to be made that insufficient early treatment is worse than no treatment at all; that giving small doses of arsphenamine, and insufficient doses of arsphenamine at first, stirs up the spirochetes to greater activity. After the preliminary and very vigorous treatment, small doses are better than large doses. Many observers are opposed to mercurial treatment. As far back as Fournier and up to Gennerich, whose recent monograph is the best, latest, and most authoritative work on the subject, there have been men who claim that mercurialization predisposes the patient to tabes dorsalis and general paresis.

How shall neuro-syphilis be treated? There is no unanimity on the subject, and it may be said that each case is a law unto itself, and that no case except in the last stages of the disease should be discarded as non-treatable. Gennerich, to cite one author, disbelieves in the intraven-

ous method as having great value, and gives in great detail his own technique, which is a development of the intraspinous method. He uses sodium salvarsan in salt solution, withdraws a very large amount of spinal fluid, mixes the salvarsan salt solution with about 50 cc. of spinal fluid, and reinjects by gravity, keeping the patient absolutely quiet and in bed for two days, with the foot of the bed elevated. He gives precise directions as to dosage and technique. His results have not been duplicated by others and there is a wide difference of opinion in regard to the value of the treatment. Recently, Solomon, of Boston, has set forth his views on treatment, which the reviewer thoroughly commends. He believes that all avenues of approach should be utilized, including the intravenous, the spinal, the cistern, and the intraventricular approaches. This, of course, takes the treatment of neuro-syphilis out of the hands of the general practitioner, and out of the hands of the syphiliographer, and puts it where it really belongs, in the hands of specially trained men. It may be stated that all methods fail in some cases, and any method including potassium iodide, which must not be forgotten as a therapeutic measure in neuro-syphilis, hits the needs of some individual cases. It is wise to try one technique after another, starting, perhaps, with the intravenous method, and passing along from intraspinous to intraventricular.

There are two techniques that have been introduced into neurology in the last few years and which deserve special mention. The cisternal puncture, which has been so emphasized by J. B. Ayer, of Boston, is now accepted as a routine method of investigation of the central nervous system, which is relatively free from danger and easy of accomplishment. All reports bear out Ayer's claim in this matter and give it a special place of importance. Its therapeutic values are also special in that it renders access to the brain possible when changes in the spinal cord and meninges render such access impossible to the spinal puncture. It is probably true that this method is destined for great usefulness and will become part of the honored technique of medicine.

The second method introduced is the injection of air into the ventricle as elaborated by Dandy. Dandy's work has placed hydrocephalus on a new footing, in that he shows definitely that the foramina of Luschka and Magendie are necessary, and that when they are blocked hydrocephalus results, and that this blocking, as well as other lesions, can be definitely shown by the ventriculogram. In other forms of hydrocephalus meningeal adhesions can be definitely located by the air injection. As a result of his work the treatment of hydrocephalus has become possible surgically and good results are claimed by some writers.

It is a little early to follow Dandy in his claim that "it is now possible to localize practically every brain tumor at an early stage by means of (his) method of injecting air into the ventricles." He is emphatic in denouncing the routine performance of decompressive operations, which he considers as "the most harmful and indefensible operation in surgery." This revolutionary view is naturally not as yet acceptable. Time will tell whether the claims of this worker are justified or not, but certainly a great deal of hope is held out for the future of brain surgery by this technique.

The drug luminal needs mention as a method of treating epilepsy. This synthetic product, related to the veronal group, and introduced into American neurology by Dereum, has been widely utilized for the treatment of epilepsy. It has not lived up to the extravagant claims made for it, and it is not in any sense a cure for epilepsy, largely because there is no single disease "epilepsy." It is a good palliative remedy, better than bromides, but failing in many cases. In conjunction with bromides, and the regulation of diet and living, it affords the best method we have at present in those cases where organic brain disease of a definite type can be excluded, in the so-called idiopathic cases.

The situation in the functional nervous diseases has not been altered much in late years. Freud still holds a strong place in American psychiatry and some of his followers have out-Freuded Freud in a most remarkable way. Thus S. E. Jelliffe believes that multiple sclerosis can be psychoanalyzed and found to be dependent upon complexes and emotional stresses going on in the unconscious. The reviewer believes that Freud would be somewhat shocked, and greatly bewildered by the Jelliffe analysis, and the opponents of Freud may well take comfort in the work of Freud's followers.

The case of the returned soldier is costing the Veterans' Bureau, and incidentally the United States Government, a great deal of concern and difficulty. This is especially true of the psychoneurotic veteran. It is now three years and more since the war ended, yet there is a steady increase in the number of men asking for compensation and vocational training, who lay their "nervous" condition to the war. The larger part of these cases are genuine, yet it is difficult to ascribe, with certainty, the degree of disability sustained and its relationship to service. In how far is the present economic stress responsible? In how far is dissatisfaction with former social status and a yearning for a better social status, to be obtained through reeducation, responsible? A step forward in the treatment of these cases has been made in the Boston District, where an out-patient depart-

ment for the care of these psychoneurotic soldiers has been established. There can be no question that hospitalization is harmful to the majority of the psychoneurotic veterans, that a competent handling in out-patient departments is far better. The United States Public Health Service, in coöperation with the War Veterans' Bureau, is sending its physicians to this out-patient department for a study of its methods, and undoubtedly it will become part of the routine technique of handling the psychoneurotic veteran throughout the country.

Book Reviews.

Gynecology—Obstetrics. Practical Medicine Series, Volume 5. E. C. DUDLEY and JOSEPH B. DELLEE. 1921.

Drs. Dudley and DeLee have abstracted all the more important articles on gynecology and obstetrics that have appeared in the past year. The book is, as usual, a most valuable reference book, and serves to place in a convenient form articles collected from medical works throughout the world.

The authors' caustic remarks on the various articles are not the least valuable parts of the book.

Synopsis of Midwifery. ALEX W. BOURNE, B.A., M.B., F.R.C.S., England, Obstetric Surgeon to In-patients, Queen Charlotte's Hospital, etc. Second Edition. New York: Wm. Wood & Co., 1921.

The author in his preface states that this little handbook "is an attempt to set the principal points of obstetrics before students preparing for qualifying midwifery examinations in a simple and concise manner."

The book covers the usual fields of obstetrics, and for the students' purpose of reviewing obstetrics quickly, it may prove of good service. For the most part the teaching is sound, and if it is used as an adjunct to textbooks on obstetrics it will prove of value, but if it is used merely to cram for an examination, it can only do harm. It is not the type of book that it is well to put into the hands of students.

Obstetrics and Gynecology. Edited by JOHN S. FAIRBAIRN, Oxford Medical Publications. London: Henry Frowde, Oxford University Press, 1921.

Fairbairn has brought together under various English writers the essential material for the study of obstetrics and gynecology. Part One consists of the Life History of the Female Reproductive Organs; Part Two, Normal Reproduction; Part Three, Abnormal Reproduction; Part Four, The Infant; Part Five, Diseases of Women; Part Six, Public Health, Social and

Medical Problems; Part Seven, Operations and Other Therapeutic Procedures.

The plan of the book is rather unusual in that it joins obstetrics and gynecology under one head and places the greater part of the obstetrics before the diseases of women. From the fact that it is a collective work with many authors writing on related subjects there necessarily is some overlapping. It is not to be expected that all the procedures and the technique given in this book will be agreed to by American physicians. It is interesting, however, to read in such an interesting form the English methods of doing obstetrics. The close relationship of the diseases of women to obstetrics is brought out very clearly and a means to minimize these conditions clearly set forth. The part on Public Health and Social and Medico-Legal Problems is a most welcome addition to any textbook. In the section on Operations, the contributors have attempted to put many procedures in relatively few pages, with the result that some of the descriptions of the operative technique are not as clear as one would wish for students' use.

It is a most excellent exposition of the subjects, and deserves a wide circulation.

Manual of Midwifery. HENRY JELLETT, B.A., M.D., and DAVID MADILL, B.A., M.B. Third Edition, with 20 plates, 570 illustrations. New York: William Wood & Co., 1921.

The third edition of this book appears with Dr. Madill as co-editor. What we said in regard to the second edition we feel only more strongly in regard to the third edition. It is a most valuable book, and American physicians interested in obstetrics will all do well to own this as a book of reference.

Individual Gymnastics. A Handbook of Corrective and Remedial Gymnastics. By LILLIAN CURTIS DREW, Director of Department of Corrective Gymnastics, Central Branch, Y. W. C. A., New York City; Instructor in Corrective and Remedial Gymnastics, Central School of Hygiene and Physical Education; Formerly Director of Department of Corrective Gymnastics, Teachers College, Columbia University, New York City; direction of Dr. E. H. Bradford, Boston, and E. G. Brackett, Boston. Illustrated with 100 engravings. Philadelphia and New York: Lea & Febiger, 1922.

Miss Drew's book shows a clear conception of purpose. It contains valuable material for the physical director as well as the physiotherapist. As a whole, the statements are accurate, clear and concise. Emphasis has been placed upon matters of interest, partly from the viewpoint of the physical director and partly from the viewpoint of the physiotherapist.

Along the educational line Miss Drew wisely

emphasizes: 1, the importance of teaching good posture; 2, the need and methods of stimulating interest in posture among school children; 3, the correct exercises and progression of these exercises for faulty antero posterior posture; 4, the value of the schematograph; 5, the school problems as related to posture; 6, the place of individual gymnastics in physical education.

Along the medical line, emphasis is placed upon: 1, viscerotaxis and its treatment, so far as mechanical readjustment is of value; 2, scoliosis; 3, lateral deviations; 4, the importance of the correct use of the feet; 5, exercise, massage and diet for constipation.

The distinct features are: 1, the need and importance of knowledge of bodily mechanics for teachers of physical education as well as for the medical practitioner; 2, practicability of teaching bodily mechanics in the daily physical training period; 3, the methods of examination for diagnosis of the most frequent abnormalities found among children.

On Modern Methods of Treating Fractures (Including the Jacksonian Prize Essay on Bone Grafting). By ERNEST W. HET GROVES, M.S., M.D., B.Sc. (Lond.), F.R.C.S. (Eng.), Surgeon to the Bristol General Hospital; Consulting Surgeon to the Cossham Hospital; Surgical Director of the Ministry of Pensions Hospital, Bath. Second Edition, with 296 illustrations, some of which are fully colored. New York: William Wood & Co., 1922.

This beautifully illustrated book of 424 pages by the well known editor of the *British Journal of Surgery* contains much suggestive text. The headings of its thirteen chapters give an excellent idea of its scope. They are as follows:

1. The Teaching of Modern Problems.
2. Massage and Mobilization.
3. Treatment by Extension.
4. Experimental Observations on Operative Treatment.
5. Methods of Open Operation.
6. Experimental Observation on Bone-Grafting.
7. Bone-Grafting Operations for Fractures.
8. Fractures of the Upper Limb.
9. Fractures of the Lower Limb—Non-Operative Treatment.
10. Fractures of the Lower Limb—Operative Treatment.
11. Mal-United Fractures.
12. Open or Compound Fractures.
13. Ununited Fractures.

The work is not designed to be a textbook for either students or a complete reference book for general surgeons. It is important as representing the conclusions of a thoughtful surgeon whose extensive experimental work has been checked by a very wide war and civil experience with clinical problems. The author's experimental work has led him to the conviction that if anatomical reposition of fractures in the

goal to be sought, open operations must be more frequently performed. He also believes that internal metal splinting and bone-grafting must be very complete and often extensive. Most surgeons would hardly agree that the trend of modern treatment suggests elaborate metal internal splinting as necessary or even advisable, except in occasional instances, in order to obtain entirely satisfactory functional end-results.

He pleads for absolute aseptic technique in clean operation on bone, but considers Sir Arthur Lane's non-touch standards too meticulous and believes them often actually prejudicial to quick and accurate work.

The summaries of his very full discussions of the mobilization treatment of fractures, experimental work, metallic fixation, bone-grafting, and operative methods are excellent. A wide knowledge of the significant work of other men and of the old and modern literature adds to the value of the book.

Lehrbuch der Grenzgebiete der Medizin und Zahnheilkunde (Textbook of the Borderland of Medicine and Dentistry). By DR. JULIUS MISCH, Dentist in Berlin. Leipzig: F. C. W. Vogel, 1922.

This work is in two volumes of nearly 700 pages each. The branches of medicine which have a bearing on diseases of the teeth and jaws are taken up in such a way as to present to the dentist in a single book all the medical information which he will need and which he must otherwise obtain from many sources. To the physician the book offers in accessible form the knowledge of dentistry which is likely to be valuable to him through its bearing on diseases with which he may be called upon to deal. The book is divided into sections, each contributed by an eminent physician and supplemented by the author. The margins of the supplements are set in so that they are distinguishable at a glance from the contribution of the physician.

The subjects of the ten sections of the book are diseases of the internal organs, of children, of the nervous system, of women, of the nose, throat and larynx, of the ear, of the eye, syphilis, and occupational diseases.

Though the matter is concisely presented, the size of the book is rather formidable, owing partly to the fact that a wide range of diseases is included, and partly to the use of large print and thick paper. There are many excellent illustrations, a considerable number of which are in color.

The author claims that his work is the first of its kind, and we have seen nothing like it in any language. It would seem that the book may prove extremely useful to dentists and very helpful to physicians for purposes of reference.

Opiate Addiction: Its Handling and Treatment.
By EDWARD HUNTINGTON WILLIAMS, M.D.
New York: The Macmillan Co., 1922.

Dr. Williams has in a lucid manner outlined the nature of opiate addiction and its treatment. The book is not a monograph with references, but a pleasing and informative exposition of the subject. In the fifteen-page introduction there is an excellent discussion of the legal control of the narcotic problem. A little more than half of the contents is given to the subjects of gradual reduction treatment and rapid withdrawal methods. The last chapter entitled, "Comments and Observations," illustrates bits of the addict's life and the light in which one should view these sufferers. This small volume is of distinct value to anyone wishing to be acquainted with the subject; a subject upon which many physicians are not well informed.

The Mechanics of the Digestive Tract. By
WALTER C. ALVAREZ, M.D. New York: Paul
B. Hoeber, 1922.

This book presents in a small volume the conclusions and some tentative deductions from a large amount of laboratory research which has been the basis of a large number of articles in the periodical literature. It is an important work, and one whose ultimate value can be decided only by further study and discussion by physiologists, and not by any present review. The general teaching, so far as it is followed by one out of touch with special laboratory physiology, is to the effect that the musculature of the digestive tract is autonomous, or controlled by its inherent properties, rather than subject to nerve control, as has been previously taught. Moreover, the muscle of different parts of the digestive tract differs in action, according to its location, and the differences in action throughout the digestive tract change progressively in the course of the tract, according to a "gradient," or progressive variation, by which all parts of the tract are normally coördinated so as to produce the normal effect upon the course of their contents.

The experimental evidence is based chiefly upon studies of small excised segments which carry the conviction that their accuracy is beyond question. The discussion delves deeply into the literature of physiology, both human and comparative, for additional evidence, and a large bibliography is appended. Of chief interest to physicians is the chapter on Practical Applications of the Theory to Clinical Disorders. Here the author discusses disturbances of gastric and intestinal function which may plausibly be explained as the results of abnormal "gradients," or reversed peristalsis. His argument as a whole is highly suggestive. In so far as it deals with the intestinal tract it impresses one with a probability of its truth.

Extension of the theory to cover the disorders of the stomach, however, involves a greater revision of the clinician's previous memories and beliefs as to physiology.

So much is attributed to disturbance of motor function that the reader can not avoid questioning whether the author has not focussed his attention too closely on peristalsis to the exclusion of other factors which perhaps we can not, after all, afford to disregard. It may be that this work will institute an important modification of our conception of the clinical disorders of the stomach, but before its general acceptance by clinicians more evidence more simply stated will be necessary.

Pharmacology and Therapeutics. Edited by
BERNARD FANTUS, M.S., M.D. *Preventive
Medicine.* Edited by WM. A. EVANS, M.S.,
M.D., etc., with the collaboration of G. KOEHLER,
M.D. The Practical Medicine Series,
Vol. vi. Chicago: The Year Book Publishers,
1921.

While this volume of the series includes two separate subjects, both divisions serve a similar purpose in their respective fields, namely, to enable a reader to read quickly in brief summary, a large number of publications of possible importance that would otherwise have escaped his attention. The first section, devoted to Pharmacology and Therapeutics, is of the greater interest to most physicians. Here the editor's task in selecting from a very large number of published reports only those which present a reasonable prospect of proving of value has been a difficult one, but he seems to have accomplished it with good judgment. The result is a large number of suggestions and cautions, and discussions, bearing upon medical treatment, which deserve consideration. Undoubtedly, a certain proportion of the measures suggested will not stand the test of time, and certain views will be modified in the future. Few, if any, epoch-making advances appear. Still, most readers, who are practising physicians, will find certain measures described which are worthy of a trial, and certain considerations which may lead them to modify their previous methods. In the section on Preventive Medicine, the need for critical selection seems to have been less urgent, but much is included that is of interest both to the physician and to the health officer.

The Treatment of Common Female Ailments.
By FREDERICK JOHN McCANN, M.D. (Edin.),
M.R.C.P. (Lond.), F.R.C.S. (Eng.), Surgeon
to In-Patients Samaritan Free Hospital for
Women, London; Consulting Gynaecologist,
West End Hospital for Diseases of the Nervous
System; Late President West London
Medico-Chirurgical Society, etc. London:
Edwin Arnold & Co., 1922.

This book is written to serve as a guide to the practitioner in the treatment of those common ailments encountered in the course of an ordinary general practice.

Infection, Abortion and Puerperal Infection have been separately considered because of their preponderating influence in the causation of these ailments, whilst chapters are added on the diagnosis of pregnancy and the diagnosis of cancer in the womb.

The book contains chapters on the following subjects: Pain in the Lower Abdominal and Pelvic Regions; Menstrual Disorders; Uterine Haemorrhage (Metrorrhagia), and Vaginal Haemorrhage; Infection as a Cause of Female Ailments; Uterine and Vaginal Discharge; Frequent and Painful Micturition; Sexual Ailments; Pruritus and Allied Conditions Affecting the Vulva; Backward Displacements of the Uterus; Prolapse—Uterine and Vaginal; Abortion; Puerperal Infection; Inflammation of the Fallopian Tubes (Salpingitis); How to Diagnose Pregnancy; How to Diagnose Cancer in the Womb.

This little volume of 152 pages gives the reader a fairly adequate but very brief idea of the various conditions described. The author's paragraphs are in most cases much too short; they would be valuable to an experienced practitioner but not so valuable to a man seeking detailed information. They are oftentimes more suggestive than descriptive. A considerable amount of space is devoted to medical treatment, and prescriptions are written out in detail. There are no illustrations. There is an index of eight pages. This book would not be suitable for a medical student as it does not go enough into detail or pathology.

Current Literature Department.

ABSTRACTORS.

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THE DIAGNOSIS OF SYPHILIS.

HAZEN (*Am. Jour. of Syph.*, Vol. v, No. 3, July, 1921) gives the advice "Be quick to suspect syphilis, be slow to diagnose syphilis." The article cannot be reviewed and should be read by everyone; so concisely stated are the 25 methods of examination that the article would have to be presented *in toto* to be of value. These 25 methods extend from the examination of the primary, through ophthalmic and neurological and serological examinations, to the autopsy. All are urged to read the original article.

[A. W. C.]

LUETIN.

WARD (*Am. Jour. of Syph.*, Vol. v, No. 3, July, 1921) presents in the form of charts and graphs the results of luetin tests in a considerable group of syphilitics of all stages and in potential syphilitics. Luetin was made according to Noguchi's original formula, except that six strains were used instead of two, and that the cultures were older than Noguchi's. In a large number of these cases simultaneous Wassermann tests were made, using both the alcoholized human heart and cholesterolized antigens.

The results lead to the conclusion that as an indicator of the value of antisyphilitic treatment it verifies the Wassermann in a high percentage of cases, but remained positive in 10 per cent. to 15 per cent.; and that each alone, the luetin and Wassermann tests, expresses but a limited truth; together a more rational conception is possible, especially in estimating the establishment of a cure; that luetin is in need of standardization and probably can easily be improved.

[A. W. C.]

A VALUABLE METHOD OF TREATMENT IN SELECTED CASES OF SYPHILIS.

GUY (*Am. Jour. of Syph.*, Vol. v, No. 3, July, 1921) emphasizes very strongly the need of individualization in treating syphilis and of long continued treatment in syphilis, and of intensive treatment in cases that are physically fit.

He outlines the type of treatment he has used in a number of cases in all stages who are physically fit, aggregating about 500 intravenous injections—a modification of the method advocated by Pollitzer. He gives 0.1 gm. of arsphenamin for each 30 pounds of body weight on each of three successive days. This is repeated after one month, and again one month later. In selected primary cases he has occasionally given the second three injections after an interval of two weeks. Mercury is given by intramuscular injections up to the limit of tolerance during the whole period and for a month after the last group of arsphenamin injections. Then a rest of eight weeks is given and the whole repeated, except in dark-field-positive, Wassermann-negative cases.

[A. W. C.]

THE TOXIC ACTION OF ARSPHENAMIN AND NEOARSPHENAMIN.

PATCH (*Cow. Med. Assn. Jour.*, Vol. xi, No. 8, Aug., 1921) discusses the standards established by the United States and the British governments for toxicity tests of the arsphenamin group and reviews recent literature on tests, preparation of the drugs, and the essentials of safe technique in administration. It is probably true that there is no one cause of reactions, but that causal factors are to be found somewhere in the relation between patient, drug, and technique. He emphasizes the fact that the solution of the drug for administration involves accurate and important chemical reactions and that all reagents should be chemically pure and all apparatus scrupulously clean and all quantities exact. Glassware should be dry sterilized. Only freshly distilled water should be used. For arsphenamin injections, isotonic saline should be used, 20 c.c. to 0.1 gm. of the drug. Chemically pure sodium hydrate should be used, adding slowly until it clears, then one-fifth in excess, all without vigorous shaking. The solution should be administered as soon as possible and given slowly. For neosarsphenamin, if concentrated solutions are used (0.2 gm. in

3 c.c.), distilled water should be used. If dilute solutions are used, normal saline solution should be the medium.

[A. W. C.]

PREVENTION OF MENTAL BREAKDOWN.

BARAGAR (*Cos. Med. Assn. Jour.*, Vol. XI, No. 8, Aug., 1921) sums up his ideas of possible control of the problem as follows:

1. Medical and social. By the adequate prevention and treatment of alcoholism and syphilis.

2. Heredity. By steps to prevent the bringing into the world of individuals likely to have a mental breakdown. This may be obtained to some extent by contraceptive measures, and possibly, in certain cases, by sterilization, but chiefly by building up high social ideals and a strong and enlightened public opinion, and by emphasizing the true object of matrimony.

3. Developmental. Insure for each child a healthy body. Develop in each individual healthy habits of thought and objective interests, taking care that more youthful or inefficient modes of adjustment do not become fixed. Balance properly the child's physical and mental activities. Face frankly and take steps to counteract abnormal tendencies in the child. Open out the child with a sensitive and "shut-in" personality. Teach the psychopathic or neurotic child to control himself. Guide the boy and the girl through the troublesome period of puberty. Sex knowledge should be imparted to the child in the home by the parents as it is spontaneously demanded.

4. Immigration. Wise and well-enforced immigration laws are required.

[A. W. C.]

UNsuspected SYPHILIS OF THE NERVOUS SYSTEM: ITS LABORATORY DIAGNOSIS.

MATTLAND (*Cos. Med. Assn. Jour.*, Vol. XI, Nos. 9, 10 and 11, Sept., Oct. and Nov., 1921) summarizes his article as follows:

A large percentage of unselected cases of syphilis have central nervous system involvement as evidenced by pleocytosis and a positive Wassermann reaction in the cerebrospinal fluid. The onset may be very early. In a few cases they were demonstrable before the blood Wassermann became positive.

The lesion is undoubtedly a syphilitic meningitis. This conclusion is based not only on the lymphocytes in the spinal fluid but also on the frequent appearance therein of polymorphonuclear leucocytes when the count is high. In a large proportion of the affected cases the fluid showed a positive Wassermann reaction, and in one case (with 1000 cells per c.m.m.) S. pallidum was demonstrated in the fluid by the dark-ground illumination. The C. N. S. involvement was found in all stages of the disease. A striking feature of the investigation was the large percentage of so-called "latent" cases with spinal fluid alterations.

Another outstanding feature was the very frequent absence of symptoms or signs of disturbed nervous function. A considerable proportion, however, had lesions of the eye grounds, slight in extent, but nevertheless indicative of a beginning retinitis.

Affections of the internal ears were found not to be a reliable indication of C. N. S. involvement in the cases of this series.

The intravenous administration of novarsenobillon restored many cases to normal and in others effected a marked improvement in symptoms and findings. On the other hand, a few cases showed a definite resistance to treatment, and in some the

meningitis actually progressed in spite of repeatedly renewed treatment.

The finding of cerebrospinal fluid with increased cell count should have a profound bearing on the prognosis and treatment of a case of syphilis. As soon as the organisms have invaded the C. N. S. the difficulty of bringing about a cure is increased. Failure to cure was four times as common in cases with over ten cells per c.m.m. as it was in those whose fluid was normal. One reason that may account for this failure is the relative inability of salvarsan and other similar compounds to penetrate into the brain parenchyma.

In view, therefore, of the important bearing that an involvement of the C. N. S. has in the prognosis and treatment of syphilis, it is probable that lumbar puncture should never be omitted as a routine in the first examination of all cases of syphilis.

[A. W. C.]

SPINAL DEFORMITY AS A CAUSE OF CARDIAC HYPER-TROPHY AND DILATATION.

FINLEY (*Cos. Med. Assn. Jour.*, Vol. XI, No. 10, Oct., 1921) describes four cases, two of them with autopsy, of severe kyphosis and scoliosis with serious embarrassment of heart action. The lung capacity in the two autopsied cases was greatly diminished also. The cases showed a "normal dyspnoea" with cyanosis and varying degrees of fluid in the serous cavities. The cases are reported to emphasize the fact that such cases exist, and not as infrequently as might be thought.

[A. W. C.]

THE CAUSE OF THE "AMMONICAL DIAPER."

HART (*Cos. Med. Assn. Jour.*, Vol. XI, No. 10, Oct., 1921) takes up in detail his methods of studying the problem and gives in chart form the results of careful study of several cases. He is very sure that the ammonical diaper is due to external causes, of which the most frequent is the leaving of alkali after washing. The second cause is the contamination of the urine by organisms either from an infection of the genito-urinary tract or from some contamination from the outside. The free ammonia comes largely from the breaking down of the ammonium salts in the urine, so that a liberal diet is a factor; starvation, by reducing the ammonium salts excreted, temporarily cures the condition. A nearly neutral urine will more easily than a highly acid one become alkaline and liberate ammonia. The administration of large amounts of alkali will decrease the excretion of ammonium salts. A highly concentrated urine, containing relatively more ammonium salts, will give off more ammonia than a dilute one. From a clinical standpoint all that one need consider is boiling of the diapers to get rid of the contamination by bacteria and thorough rinsing to get rid of the alkali left in washing.

[A. W. C.]

BLOOD TRANSFUSION IN SEVERE BURNS IN INFANTS AND YOUNG CHILDREN.

ROBERTSON (*Cos. Med. Assn. Jour.*, Vol. XI, No. 10, Oct., 1921) describes the results in seven cases of severe burns in young children, using the following technic, worked up to try to prevent the secondary or toxic shock: Blood is withdrawn from whatever vein is selected, most conveniently the longitudinal sinus, or external jugular, or saphenous, until the child shows signs of serious blood loss; then transfusion is started by another vein, the outflow being still allowed with care for some little

time yet. If the margin of safety is too closely approached and the pulse becomes imperceptible, adrenalin will bring back the tone of the circulation until enough blood flows in to take care of everything. Figures showing the severity of the burns and temperature charts accompany the case histories.

[A. W. C.]

OBSErvATIONS ON THE ETIOLOGY OF INFANTILE ECZEMA.

WRIGHT (*Cen. Med. Assn. Jour.*, Vol. XII, No. 1, Jan., 1922) found that eczema in breast-fed babies usually occurs in the well-nourished. Skin tests in several cases showed a sensitization to articles of food, such as white or yolk of egg, which had never been fed to the infant, but which the mother was eating in considerable quantity; when these articles were removed from the mother's diet the eczema usually improved greatly or disappeared entirely.

In artificially fed babies there is frequently an offending protein directly taken by the baby, and in such cases it can be tested for and removed from the diet. Some of these babies, however, show no positive skin tests to any of the foods; many of them improve on fat-free diet, with later gradual replacement of the cream. The author advises local care of the skin, of course, as well as regulation of diet.

[A. W. C.]

SOME NEW ANAESTHETIC ETHERS.

WEBSTER (*Cen. Med. Assn. Jour.*, Vol. XII, No. 1, Jan., 1922) says that ethyl ether as prepared for anaesthetic purposes contains small quantities of impurities, especially alcohol, water, acetone, mercaptans, thio-ethers, and, after oxidation on standing, aldehydes, peroxides, and acids. Cotton of Toronto worked out the "Cotton Process Ether," consisting of highly refined diethyl oxide plus two volumes of ethylene, one-half volume of carbon dioxide, and one per cent. by weight of ethyl alcohol; he did this after finding that chemically pure ether has no anaesthetic properties. The author used it by the open and closed methods and with nitrous oxide and oxygen, and found little or no advantages over the usual preparations of ether. Another, ethaneal, was worked out by Wallis and Hewer of London; this contains two per cent. of the ketones added to pure ether. The following advantages are claimed for it over ordinary ether:

1. It is less toxic than chloroform or ether, and the margin of safety is greater than with ether.
2. Less irritating to the respiratory passages than ether.
3. Post-anæsthetic vomiting is less than with chloroform or ether.
4. The taste and smell noticed afterwards by the patient are much less than with ether, and are generally absent.
5. The pulse pressure is higher than with ether or chloroform.

The author does not find these claims untrue, and finds that the stages are rather shorter, relaxation is greater, breathing more quiet, and only two-thirds as much is required. The patient may be carried much lighter throughout than with ordinary ether.

[A. W. C.]

THE ETIOLOGY OF RICKETS.

TISDALE (*Cen. Med. Assn. Jour.*, Vol. XI, No. 12, Dec., 1921) takes up in detail the various theories of the causation of rickets and gives seven photomicrographs illustrating rachitic changes. He

summarizes his article as follows: Pathological conditions have been produced in the bones of rats, which bear a fundamental resemblance to the bone lesions present in human rickets. These changes have been produced by feeding (1) diets containing an insufficient amount of phosphorus and an unidentified organic factor, the other organic and inorganic constituents being at an optimal concentration; (2) diets containing an insufficient amount of calcium and the unidentified organic factor, the other organic and inorganic constituents being at an optimal concentration.

Congenital or foetal rickets, if it occurs at all, is an extremely rare condition. No proof has been given that rickets is due to a derangement of the function of the glands of internal secretion and no evidence has been advanced that infection, confinement, or defective hygienic conditions are more than contributory factors in the production of this disease. A deficiency of phosphorus alone, calcium alone, or the anti-rachitic factor (fat soluble A') alone, in the diets given to rats, will not produce rickets.

The geographical distribution of rickets may be explained on the basis of the effect of the diet, and possibly of sunlight, on the prevention of the disorder. In the tropics the children are not only exposed to sunlight, but their diets generally have a large percentage of leafy vegetables which contain a considerable quantity of both the anti-rachitic organic factor and the inorganic salts. The anti-rachitic organic factor is contained in large quantities in cod liver oil, and so far as it is known rachitic lesions cannot be produced by any means provided this oil is supplied in the diet. The use of fish as a staple article of food by the inhabitants of the far North gives an adequate explanation for the infrequent occurrence of rickets in that region.

The possible effect of sunlight on the prevention and healing of rickets and the favorable results obtained by means of ultraviolet rays are extremely interesting when considered with the known effect of the anti-rachitic organic factor. When cod liver oil is given to rachitic children it causes a marked deposition of calcium salts in the bones. Ultraviolet rays appear to have an identical effect. The question arises whether the ultraviolet rays produce or cause to be liberated a substance similar to that in cod liver oil, which stimulates the deposition of calcium salts in the bones, or, on the other hand, whether the beneficial effect is due to the emanation of certain rays produced by the oxidation in the body of the unidentified substance in cod liver oil, which rays might be similar to those present in the light from the mercury vapor quartz lamp, or sunlight. It is known that the permeability of plant cells for certain inorganic salts is increased by exposure to light. It is also known that fatty oils emit light on oxidation. Further experimental work is necessary for the settlement of this most interesting question.

The recent work of McCollum, Simmonds, Shipley, and Park, although it constitutes a distinct advance in our knowledge of the production of experimental rickets in animals, does not solve the problem of human rickets. Many children develop this disease when they receive a diet of cows' milk which contains a large amount of phosphorus and calcium. In fact, rickets may be seen in infants receiving almost any diet. Nevertheless, it is a striking fact that the diets of most of the children who develop rickets are ill-balanced and low in the anti-rachitic organic factor. In all probability it will be shown that rickets in the human is due to dietary defects, with a possible combination in certain cases of an insufficient amount of sunlight.

[A. W. C.]

NON-TUBERCULAR KIDNEY INFECTIONS.

SULLIVAN (*Ann. of Surg.*, April, 1922) writes as follows:

That the kidney is the eliminating organ for circulating microbes, and in the course of this elimination may itself be damaged in a variety of ways.

[Haematogenous] infection may be restricted not only to a single kidney, but even to a circumscribed portion of the organ.

The source of the infection may not only be a general disease, but a distant and apparently insignificant focus may be responsible.

Metastatic haematogenous infection of the kidney peri-epithelial or paraneuritic abscess is not always recognized, and may be confused with intra-abdominal infections.

A sudden attack of pain in kidney region, associated with fever, in a patient known to have a suppurative process elsewhere in the body, should excite suspicion of metastatic kidney infection.

Cystoscopy and pyelography are valuable aids, especially when urinary changes are incomplete, or the symptoms are referred to the healthy side.

The treatment of perinephritic and paraneuritic abscess is early drainage. Where the suppuration involves the kidney parenchyma, or where the process is an acute fulminating one, nephrectomy is indicated.

[E. H. R.]

STUDIES OF THE FUNCTION OF THE GALL-BLADDER.

HARER *et al.* (*Surg., Gyn. and Obst.*, March, 1922) state that the function of the gall-bladder is that of a concentrator of bile, which concentration is effected chiefly by the lymphatics. That the gall-bladder is emptied of its contents—if it is emptied at all through the cystic duct—by pressure of adjacent, distended and congested organs during digestion, and by the milking action of the duodenal peristaltic waves, and that the rhythmic contractions of the gall-bladder are of no importance in this respect. That by means of the lymphatic infections are carried from the gall-bladder to the glands at the head of the pancreas, producing a lymphangitis and lymphadenitis and a lymph stasis which later becomes organized and results in chronic pancreatitis.

[E. H. R.]

SURGICAL ANATOMY OF THE TRIGEMINAL NERVE.

KANAVEL AND DAVIS (*Surg., Gyn. and Obst.*, March, 1922) emphasize the following points:

1. The distance from a point upon the inner surface of the squamous portion of the temporal bone opposite the pregenoid tubercle to the foramen spinosum was found to average 2.47 centimeters.

2. There are six distinct types of middle meningeal arteries, the larger percentage of which give off single anterior and posterior branches.

3. The distances from the foramen spinosum to the gasserian ganglion, foramen ovale, and foramen rotundum, respectively, are 1.66 centimeters at an angle of 20 degrees occipital from a transverse diameter through the foramen spinosum; 0.7 centimeter at an angle of 30 degrees frontad from the transverse diameter; and 2.27 centimeters at an angle of 36 degrees frontad from the transverse diameter.

4. In 41 per cent. of cases a marked bony prominence overhangs the foramen spinosum, which leads to difficulty in elevating the dura mater and ligating the middle meningeal artery. Further, in 38 per

cent. marked lateral grooves are present which may lead to difficulty in localization of the operative field.

5. An attempt should be made to save the motor root, which lies medial to and somewhat superior to the sensory root centralward from the ganglion.

6. A thin membrane lies between the gasserian ganglion and the carotid artery in 40 per cent. of the skulls examined.

7. The cause of the paralysis of the seventh nerve which infrequently occurs cannot as yet be definitely stated.

[E. H. R.]

THE REGISTRY OF CASES OF BONE SARCOMA.

CODMAN (*Surg., Gyn. and Obst.*, March, 1922) describes in detail his plan for registry of bone sarcoma, with which practically every physician in the country is already familiar from the literature sent out by Drs. Codman and Bloodgood. He describes the plan of work, future plans, the proper nomenclature to use, gives a brief analysis of the work up to Jan. 1, 1922, and describes also how to register a case of bone sarcoma.

The importance of this work is emphasized by the statement that there are today only four known cases of true bone sarcoma in this country which were all treated by amputation alone. The seriousness of the disease and the necessity for more intelligent treatment are therefore evident.

[E. H. R.]

SARCOMA OF THE LONG BONES.
A STUDY OF MICROSCOPICALLY PROVED CASES.

MEYERING (*Surg., Gyn. and Obst.*, March, 1922) reports the results on 109 cases subjected to careful examination. He presents outline charts graphically showing the relative frequency of the various forms of sarcoma in various regions of the long bones of the body. This is a very valuable chart. X-ray plates accompanying the article also beautifully illustrate the text.

In regard to treatment, he states that, when a tumor of the bone is suspected of being malignant, roentgenograms of the chest are made routinely. The cough, with evidences of increased intrathoracic pressure, appears too late to be of diagnostic value. Metastasis to the glands or to other structures of the body should be ruled out if possible. The extent of local growth is then determined. After all possible means have been taken to rule out metastasis and syphilis, the type of treatment must be considered. The rapidity of growth and the duration of symptoms are important. The tumor should be explored before the limb is amputated. Many radical operations have been performed and limbs needlessly sacrificed because of failure to explore. With a tourniquet applied, exploration may be safely accomplished and the macroscopic and microscopic appearance noted.

The most malignant sarcomas in the series of 82 patients was the osteosarcoma.

A diagnosis should be made only after thorough clinical, physical, and roentgenographic examinations have been made, and even then cannot always be determined until an exploratory operation and microscopic examination rules out giant-cell tumor, chondroma, fibrocystic or cystic disease, syphilis, and osteomyelitis. The principal points to be decided before operating are malignancy, metastasis, and the extent of bone involved. With early diagnosis, with eradication of the tumor, with care to exclude patients with metastasis, and with the use of radium, roentgen-ray, and Coley's toxin, prolongation of life may be looked for following operation.

[E. H. R.]

THE CLINICAL ASPECTS OF ABDOMINAL TUBERCULOSIS.

MORLEY, J. (*British Medical Journal*, March 11, 1922), discusses the various types of abdominal tuberculosis and sums up the general indications for operation in these conditions as follows:

"Pain, when it occurs in recurrent, well-defined, colicky attacks, especially if they return with regular periodicity and sharp intensity, signifies a mechanical interference with intestinal peristalsis, and this can only be relieved by operative measures.

"Glandular masses in the mesentery, if not too extensive, and if they do not yield rapidly to constitutional treatment, should be excised, and this is particularly urgent when they are associated with colicky attacks of pain.

"Palpable masses in the ileo-caecal region, associated with signs of chronic intestinal obstruction, are an emphatic indication for laparotomy and resection of the tuberculous ileo-caecal region, should such be found.

"The ascitic form of tuberculous peritonitis is essentially a disease for surgical treatment. The operation is free from danger, and its beneficial results are usually dramatic. I need hardly labour the point that the utmost care in the medical or constitutional treatment is of great importance in the cure, but I wish to emphasize the view that operation is almost equally essential.

"Finally, in the plastic type of tuberculous peritonitis, if the trouble does not yield to the ordinary medical measures, operation may be undertaken with a fair degree of safety, provided that no extensive attempt is made to separate adhesions; and there is some ground for hoping that even these apparently desperate cases may make a complete recovery." [J. B. H.]

A STUDY OF THE RELATION OF THE ADRENAL GLANDS TO EXPERIMENTALLY PRODUCED HYPOTENSION (SHOCK); WITH A NOTE ON THE PROTECTIVE EFFECT OF PRELIMINARY ANESTHESIA.

RICH (*Johns Hopkins Hosp. Bull.*, March, 1922) in the following paragraphs summarizes his investigations concerning the relation of the adrenal glands and shock:

I. Adrenalectomized animals, subjected to uniform intestinal manipulation before the blood pressure has begun to decline as a result of adrenalectomy, fall into shock exactly as do normal controls—the time required for the production of shock and the character of the blood pressure curves being the same in both series. It is therefore concluded that disordered adrenal function is not a factor in the production of shock.

II. Hypotension invariably results from removal of the adrenal glands, and with the development of hypotension the circulation of adrenalectomized animals appears to become more unstable than that of normal animals even before the appearance of asthenia. The blood pressure begins to fall several hours after adrenalectomy and becomes progressively lower until death. The fall in blood pressure is shown to be independent of the operative trauma and begins before asthenia has appeared. This is offered in support of the idea that the adrenals are concerned in the maintenance of the blood pressure at the normal level, and certain objections to this belief are briefly discussed.

III. Animals that are kept lightly anesthetized with ether, for an hour immediately before the abdomen is opened, become very resistant to the shock-producing effect of intestinal manipulation. Even when subjected to severe peritoneal trauma for a period of three hours, the blood pressure shows practically no tendency to fall and sensibility is

retained. In contrast, if identical intestinal manipulation is begun more promptly after anesthesia, the blood pressure invariably begins to decline progressively within an hour, has fallen to 60 mm. or below an hour and a half to two hours after opening the abdomen and the animal is in complete shock. An hour's ether anesthesia preliminary to opening the abdomen has proved to be a striking protective against shock, under the conditions of these experiments. If an animal is kept anesthetized for an hour, permitted to recover from the anesthetic, and at once reanesthetized and intestinal manipulation begun, the protective effect of the hour's anesthesia will have disappeared.

IV. Ether has a distinct tendency to hasten the onset of shock once the blood pressure has begun to decline after the abdomen is opened.

V. Cardiac failure is not a factor in the production of shock.

VI. Failure of the vasomotor center is not a primary factor in shock.

VII. The cardio-inhibitory center is shown not only to respond to stimuli but also to function independently during deep shock. Its failure cannot be regarded as a cause of the condition.

[J. B. H.]

A CLINICAL AND ANATOMICAL STUDY OF FIFTY-ONE CASES OF REPEATED CAESAREAN SECTION, WITH ESPECIAL REFERENCE TO THE HEALING OF THE CICATRIX AND TO THE OCCURRENCE OF RUPTURE THROUGH IT.

GAMBLE (*Johns Hopkins Hosp. Bull.*, March, 1922) presents a thorough and careful summary of repeated Caesarean sections, particularly in relation to its pathology, concluding as follows:

1. The weak Caesarean scar may be due to a single factor or to a combination of factors, the most important of which is infection.

2. An afebrile puerperium does not give an absolute assurance of perfect wound healing.

3. The perfection of technique in suturing the uterine incision will undoubtedly lessen the incidence of weak scars.

4. Chromic catgut, in our hands, has proved to be a satisfactory suture material.

5. The uterine wound should not be closed, if possible, until firm contraction of the musculature has occurred.

6. As a rule foetal elements do not invade the uterine scar.

7. Adhesions following Caesarean section are common. They are not necessarily the result of coexisting infection, and may give rise to serious complications at subsequent operations.

8. The dictum "once a Caesarean, always a Caesarean" cannot be accepted without considerable reservation.

9. A patient who has once been subjected to a Caesarean section should enter the hospital several weeks prior to the expected date of confinement, so that she may have the benefit of immediate operation should rupture occur.

His list of references is a long and complete one. [J. B. H.]

THE CAUSES OF FREQUENCY OF MICTURATION, WITH REFERENCE TO DIAGNOSIS AND TREATMENT.

IRWIN (*The Practitioner*, March, 1922) discusses 28 causes of frequency of urination and briefly the treatment of these various conditions.

This article is more in the nature of a summary of this subject than anything else.

[J. B. H.]

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MEDICAL EDUCATION AND MEDICAL PROGRESS.

CRITICISM of the medical profession by those not of it is always stimulating. It is particularly so when it is constructive in its nature, and when it is based upon a knowledge of the facts and inspired by a sympathy with medical achievement. Of such a character is that section of the Sixteenth Annual Report of the Carnegie Foundation for the Advancement of Teaching dealing with "The Relation of Medical Education to Medical Progress," written by Henry Smith Pritchett, the president of the Foundation. Dr. Pritchett, being an educator, is naturally chiefly concerned with the educational aspect of medical progress, and this report consists of an evaluation of the several agencies of medical education, with comments upon their present weaknesses and suggestions for future improvements.

The undergraduate school of medicine is dealt with from the point of view of the quality of the teaching and the arrangement of the curriculum, and as regards its relation to the community. Dr. Pritchett says that "perhaps no defect in the medical school makes a sharper impression upon the lay visitor, familiar with the quality of teaching in our more serious colleges, than the lack of good teaching, and particularly in the teaching of professional

subjects." He does not belittle the value to the medical school and the students' imagination of the great clinician or surgeon, but he expresses the wish that the latter could "bring themselves to consider the art of teaching as also within their sphere of educational activity."

"The medical curriculum of today represents the conception of teaching of half a century ago modified by certain laboratory practice superimposed upon it." It is altogether wrong, Dr. Pritchett believes, to teach anatomy, physiology, pathology and chemistry as separate sciences, quite apart from their clinical applications. "The practical remedy for this situation is to reduce the amount of theoretical instruction in the first two years, and to change the character of the teaching so as to make clear the fundamental facts, while at the same time starting the clinical instruction with the very beginning of the course. The student should learn his anatomy and his pathology through his clinical training—not reverse the process. No other reform in medical teaching approaches in importance this one."

It is doubtful whether there would be general agreement as to the practicability of this suggestion. Certainly the application of the fundamental sciences to clinical medicine and surgery should be constantly emphasized; the students' interest in them will be enhanced by an early realization of their practical importance. On the other hand, these sciences are the foundation upon which all knowledge of medicine is erected; until the foundation is firmly established no lasting superstructure can be reared.

The situation as regards the number of medical schools is well summarized by Dr. Pritchett. Due chiefly to the campaign for better medical education carried on by the American Medical Association, and to the report of Mr. Abram Flexner, the number of medical schools in the United States was reduced from 180 to 85. Dr. Pritchett questions whether this reduction was not too drastic; in some instances where a school existed alone in a more or less isolated district, it might have been better to have strengthened the school rather than to have destroyed it. Dr. Pritchett would have about 100 medical schools in this country.

While Dr. Pritchett urges the encouragement of graduate teaching, he makes no special suggestions along this line. His comment upon the situation as regards the "country doctor" appears to be extremely sound, but upon analysis the observer, disillusioned by personal experiences in such communities, may doubt the practicability of these suggestions. He starts with the assumption that the people of rural communities should not be expected

to put up with a lower grade of doctor than one finds in larger cities. He believes that the reason why country practice has ceased to appeal to younger medical men is because of the lack of scientific facilities for doing good work, i.e., laboratories and hospitals. Let each community with a radius of perhaps ten or fifteen miles establish a hospital and laboratory through the co-operative efforts of doctors and citizens. Except in a few sparsely settled districts this will be easily possible, he says, and will give every citizen the chance to receive adequate modern medical treatment and will induce the younger men to settle in smaller communities without fear of loss of scientific attainments or prestige.

The function of hospitals is to serve the sick, to educate the public and the profession, and to aid research. On the subject of medical research Dr. Pritchett speaks with much discrimination. Although he does not condemn "research" in definite words, one gets the impression that he does not favor it as an end in itself. He divides those engaged in this work into four classes, the first three graded according to their originality and productivity of real knowledge; the fourth consisting of those who "join the army of research because they are not strongly drawn in any other direction and research is today a word to conjure with." . . . "It is probably fair to say that the bulk of the money spent in the name of research in American colleges and universities is absorbed by the fourth group of 'researchers'." . . . "The outcome of all these subsidies is problematic." . . . "To justify a subsidy for research in the case of a man whose primary duty is to teach, at least two things should be made clear: First, that the proposed 'research' concerns something that is worth while in the opinion of men qualified to judge; secondly, that he who undertakes the research is master of the knowledge and of the technic necessary if his study is to have any promise of fruitage."

The cost of all this education and research has risen enormously and has reached a point where further increase will be difficult. Dr. Pritchett says that the cost of medical teaching and of medical service must be borne equitably by the great body of citizens who profit by them. They cannot be supported by private philanthropy, nor will they be supported by taxation unless they are available for all. "Sooner or later, medical school, hospital, research laboratory and diagnostic clinic must be part of one organization, and the support of the whole system must come in the main from the payments of those who are taught, diagnosed, treated, or nursed by it." These ends will be served by organization of the medical profession, notably by the develop-

ment of co-operative clinics in connection with hospitals and medical schools.

Within this report of 20 pages, every sentence of which reveals a sincerity and a wide acquaintance with medical problems, there is much to consider. Most medical men lead lives of intensive individualization; they spend their days concentrating upon single symptoms, single cases, one at a time. It is only when they are shaken out of this concentration that they see their work in its relation to the social structure of which they are a part. Such a perspective is greatly helped by commentaries such as this one of Dr. Pritchett's.

HOOKWORM TREATMENT.

THE United States Department of Agriculture has published the results of studies made in the use of carbon tetrachloride in the treatment of hookworm.

Dr. Maurier C. Hall tested this drug on dogs and on himself. His results led medical men in many countries to investigate his claims, and favorable results are being received by the department.

A condemned prisoner in Ceylon, infested with hookworm, was treated, and after his execution a post-mortem examination showed that all the parasites had been removed. Ten cubic centimeters of the drug were administered. Twelve thousand natives of the Fiji Islands have been successfully treated by the same method. Thus far, carbon tetrachloride has produced no ill effects, which is in marked contrast with the old remedies of thymol and oil of chenopodium, for fatalities have followed the use of the latter.

Carbon tetrachloride is given in capsules. Evidence seems conclusive that the health and efficiency of millions of human beings, including many thousands in our southern states, will be improved by the use of this drug.

ALCOHOL AND SYPHILIS AS CAUSES OF MENTAL DISEASE.

Dr. George H. Kirby has made an analysis of the conditions suggested by the above heading.

He contends that alcoholism has declined perceptibly in the general population during recent years, with a fall in the number of alcoholic psychoses. Also that as a result of education, prophylaxis and improved methods of treatment the influence of syphilis has decreased.

Henry F. Stott, in the *American Journal of the Medical Sciences*, Vol. CLXIII, No. 5,

May, 1922, estimates that 25 per cent. of poorly treated syphilitics subsequently develop syphilis of the nervous system. He contends that a spinal fluid examination should be advised at the conclusion of the second series of arsphenamin treatments, so that when intravenous medication does not prove satisfactory the intraspinal should be instituted.

BIRTH STATISTICS.

THE latest United States government statistics are for 1920. In 1915 there were only ten states in the birth registration area. In 1920 there were 23 states and the District of Columbia—estimated to contain 59.8 per cent. of the population of the United States.

In 1920 there were 1,508,874 live births, which is a birth rate of 23.7 per 1000 population. This is an increase of 1.4 over 1919.

There is a marked excess of births over deaths in the area, Vermont showing the lowest. The mortality rate of infants under one year of age in this area per 1000 is 86. The births by months from 1916 through 1920 are more frequent in March. Then there is a gradual decline until June, when the number rises through September. In 1919 the lowest number of births was in July and was supposed to be accounted for by the epidemic of 1918 and war conditions.

Among white mothers those native of the United States contributed the greatest number of cases of the first child, but this preëminence gradually declines until it is found that native-born women who have given birth to five children fall below native-born women of 13 other countries, representatives of Poland heading the list in this group; and when the record reaches the tenth child, native-born white women of this country are at the bottom of the list.

So far as industry is a factor, fathers classified as foremen, overseers and inspectors in works connected with the extraction of minerals have the highest average number of children, as shown by the figures 4.6, while the foremen and overseers on steam and street railroads come next with 4.2. Farmers are well up with a record of 3.8. Soldiers, sailors and marines seem to be the lowest on the list, with a rating of 1.8.

Among professional men clergymen head the list, with a record of 3.3; lawyers and judges with 2.4; while physicians are credited 2.3.

In 1920 there were 33,209 live births from 17,229 twins, 529 live births from 184 cases of triplets, and 23 live births from six cases of quadruplets. In 1920 the greatest number of children were born to fathers between the ages of 25 and 29 years and to mothers between the ages of 20 and 24 years.

A verification of maternal ages shows that eight mothers were tabulated in the age period of 55 or over.

The statistics relating to illegitimacy are not very satisfactory, because accurate information is not always given on birth certificates in this country. Some states do not require any statement relating to this feature. So far as statistics go, the urban illegitimate rate is 21.3 and the rural 24. No report is published of Massachusetts' illegitimate conditions.

The infant mortality under one year of age is lowest for children of mothers born in Denmark, Norway and Sweden. This rate is 72 per 1000 male births and 61 for females, while children of mothers born in the United States have a rate of 84 per 1000 births. This difference in infant mortality does not seem to be accidental for it persists year after year. The explanation given is that mothers from Denmark, Norway and Sweden more generally suckle their babies.

These statistics are of great interest and will become more valuable with greater uniformity in the reporting of births and deaths. It is generally conceded that our death returns especially are misleading, and the contention is repeatedly made that a revision of the forms in use is needed in order that correct information may be acquired. The present methods have led to bitter controversy. Statistics should be more than a compilation of figures; they should give facts in simple and available form so that students may obtain accurate information and profit thereby.

OPPRESSIVE TAXATION OF THE PRESS.

DURING the war the necessity of increasing the nation's revenue led to a tax on second class mail, by postal regulation, through four successive annual increases ranging from 100 to 900 per cent.

It is generally recognized that the maintenance and progress of civilization depend very largely on the press. An enlightened and available press tends to diminish illiteracy, isolation and prejudice, thereby improving moral and intellectual standards, and every citizen should be interested in the greatest possible facilities for the distribution of opinion and the recital of fact.

A bill known as H. R. 11965, introduced by Congressman M. Clyde Kelly of Pennsylvania, is now before the Postoffice and Post Roads committees of the House of Representatives. It provides for a reduction of the present high postal rates. No logical argument can be advanced for the retention of the present rates

other than an easy way of securing revenue, but the mere consideration of revenue should be in comparison with the main object of provision for postal service. The advantage to the nation of the greatest possible postal service should outweigh consideration of a greater income which might inhibit progress.

It is generally known that a greater volume of second class mail matter increases the amount of first class mail, hence the reduction of war-time postal taxes would, through the release of second class mail, bring about compensatory returns.

Medical literature is carrying some of the burden of the high rates, and medical men should be interested in appealing to members of the Senate and House for a return to pre-war rates.

NEWS ITEMS.

STATE BOARD EXAMINATION OF NURSES.—One hundred and ninety-six applicants for state registration as nurses were examined at the State House, June 15 and 16.

MASSACHUSETTS STATE LEAGUE OF NURSING EDUCATION.—The following officers for the ensuing year were elected at the meeting June 14: President, Miss Sally Johnson, R.N., superintendent of nurses, Massachusetts General Hospital, Boston; vice-president, Miss Jessie E. Catton, R.N., superintendent Lawrence General Hospital, Lawrence; secretary-treasurer, Miss Ruth Humphreys, R.N., assistant superintendent of nurses, Newton Hospital, Newton Lower Falls.

MASSACHUSETTS STATE NURSES' ASSOCIATION.—The following named persons have been elected officers of this association for the ensuing year: President, Miss Carrie M. Hall, R.N., superintendent of nurses, Peter Bent Brigham Hospital, Boston; first vice-president, Miss Sally Johnson, R.N., superintendent of nurses, Massachusetts General Hospital, Boston; second vice-president, Miss Marion Seaver, R.N., superintendent of nurses, St. Luke's Hospital, New Bedford; recording secretary, Miss Mary Alice McMahon, R.N., superintendent of nurses, Boston State Hospital, Boston; corresponding secretary, Miss Mary E. P. Davis, R.N., 19 Hoyle Street, Norwood; treasurer, Miss Mary M. Riddle, R.N., Newton.

BOARD OF HEALTH, WORCESTER, MASS.—Mortality report for April, 1922: United States census, 179,754; death rate, 1921, 13.25; death rate for month, 1.07. Diseases of the heart and blood vessels caused 33 deaths. Bright's disease came next in number with 23 deaths.

NEWPORT, R. I.—Mortality report for the month of May, 1922: Population, 31,047; annual death rate per 1000 population, 6.95. Organic diseases of the heart caused the greatest number of deaths.

NOTES FROM THE NUTRITION INSTITUTE IN BOSTON.—A group of 18 trained workers from all sections of the country spent the first half of June in Boston training for nutrition work. Among the members were the physician in charge of this work in a large hospital, the executive secretary of a Red Cross chapter, several dietitians, a worker preparing to take the direction of a campaign in a large Canadian city, etc. During the last week a special series of lectures and clinics was held for 12 nutrition workers and teachers who are to be a part of Dr. Grenfell's staff this summer in Labrador. The nutrition work began there in 1920 and has already become one of the chief features of the undertaking. Special voyages of the steamer *Stratheona* will carry clinical service, including that of a nose and throat specialist, to the distant stations. Dr. William R. P. Emerson and his assistants left Boston on the 16th to organize an institute in Lincoln, Neb. This will be followed by work in the summer session of the School of Education in the city of Cleveland. Several western cities, including Denver, have institutes arranged for the fall, as well as one in Honolulu.

NEW ENGLAND REPRESENTATIVES IN THE A. M. A.—Among the officers of the American Medical Association, New England is represented by Dr. D. Chester Brown of Danbury, Conn., on the board of trustees, Dr. W. B. Cannon on the Council on Health and Public Instruction, and Dr. Reid Hunt on the Council on Pharmacy and Chemistry. Among the officers of sections the names of Dr. George S. Derby in Ophthalmology, Dr. Paul D. White in Pharmacology and Therapeutics, Dr. James B. Ayer in Nervous and Mental Diseases, and Dr. Franklin W. White in Gastro-enterology and Proctology appear.

THE ANNUAL REPORT OF THE BOSTON SANATORIUM FOR 1921.—This report shows that, of the 760 deaths from pulmonary tuberculosis in Boston in 1921, 409, or 54 per cent., occurred among patients under the care of the Sanatorium. Thirty-six non-pulmonary cases were admitted during the year, and 9297 patients were treated in the Out-patient Department. There has been a decrease in the number of positive cases among new out-patients.

One of the recommendations made by Dr. Edwin A. Locke, chief of staff, is that the Sanatorium shall provide adequate equipment for the treatment of surgical tuberculosis; an-

other is that the board of trustees confer with the authorities of the Harvard Medical School as to the possibility of a combined effort to establish and maintain a department of research in tuberculosis.

During the year Dr. Friedman, assistant physician for diseases of children, resigned, and Dr. James A. Honeij has been appointed assistant physician to the Out-patient Department.

DR. ARTHUR OTIS McLAUGHLIN of Bradford died at the Hale Hospital, Haverhill, following a nervous breakdown, June 18, 1922, at the age of 42. He was a graduate of Tufts College Medical School in the class of 1912. He is survived by his widow and one son.

THE WEEK'S DEATH RATE IN BOSTON.—During the week ending June 17, 1922, the number of deaths reported was 205, against 161 last year, with a rate of 13.99. There were 19 deaths under one year of age, against 19 last year. The number of cases of principal reportable diseases were: Diphtheria, 47; scarlet fever, 20; measles, 160; whooping cough, 15; typhoid fever, 4; tuberculosis, 46. Included in the above were the following cases of non-residents: Diphtheria, 5; scarlet fever, 3; measles, 4; typhoid fever, 4; tuberculosis, 9. Total deaths from these diseases were: Diphtheria, 2; scarlet fever, 1; measles, 2; typhoid fever, 1; tuberculosis, 17. Included in the above were the following cases of non-residents: Diphtheria, 1; typhoid fever, 1; tuberculosis, 3.

BEVERLY HOSPITAL.—The monthly demonstration clinic was held at the Beverly Hospital, June 20, at 4 p. m. Doctors were present from Beverly, Hamilton, Danvers, Salem, Topsfield and Wenham. Following was the program of the clinic: Joint mouse; calculus in urinary bladder; arthritis, tonsils; x-rays of kidneys, pyelography; pregnancy, cardio-renal; hyperthyroidism; fracture of anatomical neck of humerus, x-rays; fracture of surgical neck of humerus, x-rays; cholecystitis with stones; carcinoma of sigmoid, gross and microscopical specimens.

DR. JOHN B. DEAVER, John Rhea Barton professor of surgery, and Dr. John Marshall, professor of chemistry and toxicology, in the University of Pennsylvania School of Medicine, will retire June 30, 1922. Dr. Deaver will, however, retain his position of professor of surgery in the Graduate School of Medicine. The trustees have passed resolutions of regret because of the retirement of these men.

DR. STEPHEN SMITH.—Columbia University has conferred on Dr. Smith the degree of doctor of science.

Society Report.

ANNUAL MEETING OF THE HARVARD MEDICAL ALUMNI ASSOCIATION,

JUNE 15, 1922

The Annual Meeting of the Harvard Medical Alumni Association was held at the Harvard Medical School at 3.30 p. m., June 15, 1922. Thirty-one members were present.

In the absence of the President, Dr. W. P. Bowers was nominated by Dr. Cheever to act as Chairman of the meeting, which nomination was seconded and carried.

Reading of the Minutes of the previous meeting was omitted by vote. The report of the Secretary was then made, followed by that of the Treasurer. The Appointments Bureau report was then made, following which Dr. Frothingham made a detailed report concerning the collection of subscriptions for the Association's Harvard Medical Alumni Assistants, of which there are five and for which the Association has pledged itself to raise \$500.00 each per annum. This year over \$3,000.00 had been raised, and by vote of the Association Dr. Frothingham was authorized to pay to the Medical School \$2,500.00, and to add the \$600.00 remaining to the Alumni Permanent Fund, in the hands of the Treasurer of Harvard College. Dr. Frothingham's report is as follows:

Balance received from Dr. Hugh Williams.	\$22.31
Collections	3,285.00

Expense	\$3,307.31
---------------	------------

Expense	141.85
---------------	--------

Balance on hand	\$3,165.46
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265 subscribers.

Check for \$2,500 sent to Treasurer of Harvard College to pay salaries of five alumni assistants who worked during 1921-22.

Check for \$600 sent to Treasurer of Harvard College to be turned over to the Harvard Medical Alumni Permanent Fund.

CHANNING FROTHINGHAM, Treasurer.

The matter of having the collection of this voluntary subscription combined with the duties of the permanent Treasurer of the Association was then brought up, and after discussion it was voted that this be done, and that the subscriptions henceforth be asked for by the Association's Treasurer. It was then moved and voted that the annual contribution of \$100.00 toward the Commencement Spread be again made this year.

There followed discussions regarding the dues for the Association which necessarily lapsed during the War, and it was voted that the incoming Treasurer send bills for dues to all graduates of the Harvard Medical School of \$1.00 per annum, and that they be sent out

for the present and two ensuing years, namely: 1922, 1923, and 1924.

In regard to membership in the Association, it was moved and carried that it be recommended to the Councillors of the Association that any graduate of the Harvard Medical School should become *ipso facto* a member of the Association.

The report of the Nominating Committee for officers was then presented to the Association, and the Secretary was directed to cast one ballot for their election. The following officers were elected:

Dr. Elliott P. Joslin, Boston, President.
Dr. Maurice Fremont-Smith, Boston, Treasurer.
Dr. F. M. Rackemann, Boston, Secretary.

COUNCILLORS.

For One Year.

Dr. William C. Quinby, Boston.
Dr. Philemon E. Truesdale, Fall River, Mass.
Dr. James L. Gamble, Boston.

For Two Years.

Dr. Michael F. Fallon, Worcester, Mass.
Dr. J. Howard Means, Boston.
Dr. T. J. Burrage, Portland, Me.

For Three Years.

Dr. Homer Gage, Worcester, Mass.
Dr. John M. Birnie, Springfield, Mass.
Dr. William R. Ohler, Boston.

Dr. Worcester then discussed the difficulty which rural communities are experiencing in finding doctors, and suggested that the Association might well help in providing such men. It was moved and carried that the Councillors of the Association consider the medical needs of the rural communities at an early date, to decide whether they may not be able to better conditions which exist in these districts, and to take any measures which they may find possible to come to their relief. Dr. Ames suggested that during the Fourth Year of the Medical School the class be met as a body by some member of this Association, at which meeting such matters might be laid before the students.

Dr. Holland deprecated the fact that the Harvard Medical School is of necessity compelled to limit its classes to such small numbers, following which there was a general discussion of this subject by Dr. Bowers, Dr. Denny, and Dr. Cheever.

The meeting adjourned at 5 p. m., to meet at the Hotel Somerset at 7.

There were about two hundred present at the dinner. The post-prandial exercises were presided over by Dr. Channing Frothingham, who spoke briefly of the conditions incident and subsequent to the war which made it necessary to omit the usual activities of the Association. He gave an account of the funds

raised by the Association for the Medical School and explained that every graduate would be enrolled in the membership of the Association.

He then presented Dr. David L. Edsall, Dean of the Harvard Medical School, who spoke of the conditions existing ten years ago when he came to Boston and compared them with those of the present time. Dr. Edsall explained how crowded the courses of study are today and that a student is pushed to his capacity in trying to cover the work laid out. This will make it necessary for students to have advice in planning for their work. To this end groups of advisors are provided to whom students may appeal for assistance. The men selected will try to know the hearts and minds of the students in order to direct their efforts. Standards are constantly being raised and it has been found that some students are not adapted to the study of medicine. He explained certain differences in methods of conducting examinations which would tend to demonstrate a better understanding of the problems of medicine than could be secured under former customs.

Speaking of the cost of medical education in the Harvard Medical School, it was stated that although the charges for tuition are three hundred dollars per capita, the cost is from eleven to twelve hundred dollars per capita per year, but the annual budget is less for each department than is the case in other institutions of equal standing, and spoke especially of the loyalty of the teaching staff, for these persons are working for lower salaries than could be obtained elsewhere. It has frequently happened that flattering offers have been made to members of the faculty with the hope that their services could be secured for other schools, but it has rarely happened that men have been induced to go elsewhere.

In comparing the cost with other schools, mention was made of the fact that in institutions of equal grade about double the amount of money is expended per capita in teaching.

Dr. Edsall stated it to be his belief that the faculty would rank as the strongest aggregation of talent in any school in this country. He spoke of the great additions in the School of Public Health, Industrial Medicine and the Department of Tropical Medicine, and emphasized the great opportunities presented to students of medicine to be found in the several departments of the Boston City Hospital, the Peter Bent Brigham, the Massachusetts General and the Children's Hospitals. A great aid had been given by the Rockefeller Foundation endowment, which was given without conditions. He paid a graceful tribute to Dr. Frederick C. Shattuck, who had provided for two of these departments.

In introducing the next speaker, Dr. Frothingham spoke of the common impression that a medical school should have a hospital under its control as an essential feature of medical training, but that conditions in Boston gave to the Harvard Medical School all that could be desired, for the Boston City Hospital is most friendly and has asked the School to provide men for some of its departments. Dr. Francis W. Peabody was then presented, who gave a detailed account of the Thorndike memorial which is being erected and equipped as a department of the Boston City Hospital and will be ready for work in the autumn. This building is forty by one hundred and fifty feet and will be equipped with all needful laboratories for research and investigation. Rooms and wards will be provided for the reception of cases requiring special study, drawn from the hospital patients. Funds are available for salaries of assistants working with the director of this service. This will furnish opportunity for advanced study and training and will be a great addition to the Medical School.

In planning for the future, Dr. Frothingham said that the Association in looking for a President felt that a man of super energy was needed at this time, and presented the incoming President, Dr. Elliott P. Joslin.

Dr. Joslin spoke of the work of Dr. F. C. Shattuck, who had done so much for the School in the past, but who although retired had done more than when in active work in his provision for the Schools of Industrial and Tropical Medicine, and conveyed the thought that although few of the alumni could create departments or schools, every one could be of great assistance to the Medical School, for the alumni are scattered all over the country and influence could be exerted on the student body and the faculty. He called several of the alumni by name, asserting that if students would confer with such men, much could be learned about the study of medicine and the problems of practice. He urged members of the Association to express opinions very fully about all matters relating to the School and the Association, for practitioners are in a position to convey advice of great value.

The meeting was thrown open for discussion and Dr. Thayer of Portland spoke briefly, expressing his interest in the Association.

Both the business and social meetings were stimulating and demonstrated great interest in the Association and the School. It was evident that great satisfaction is felt in the resumption of Association activities and it is hoped that concrete evidence of loyalty will be shown in the form of material contributions. The Harvard Medical School should be able to make dignified provisions for its faculty.

Miscellany.

RESUME OF COMMUNICABLE DISEASES.

May, 1922.

GENERAL PREVALENCE.

THERE were 8887 cases of communicable disease reported in May, as compared with 8399 cases reported in April, an increase of 488 cases. This is only a slight increase when it is noted that there was a decrease of 1695 cases in April from the March total. The increase was chiefly in the cases of measles reported, the total being 560 higher than in April. The other so-called "common" communicable diseases showed only slight variations.

Chicken-pox was reported in 433 instances, an increase of but 13 cases over last month, and about the usual number.

Diphtheria decreased in incidence, there being 558 cases reported, as compared with 578 for April.

Dog-bite requiring anti-rabic treatment was reported in 23 instances. This condition is still increasing rapidly, as shown in the number of reports received.

There were 10 cases of *epidemic cerebrospinal meningitis* reported, about the usual number of cases.

Encephalitis lethargica was reported in 29 instances. This is less than the total for last month, but is still much higher than 1921.

Gonorrhea and syphilis decreased in the number of reports received from April, there being 378 cases of the former and 140 of the latter reported.

German measles has been increasing slowly but steadily since August of last year, when there were but 10 cases reported. The total for this month is 96.

Measles also has shown a steady increase since the middle of last year. The total for May was 4160, an increase of 557 cases over April.

There were 514 cases of *mumps* reported in May, about the monthly average for this year.

Lobar pneumonia was reported in 417 instances, which is 43 cases more than were reported during May of 1921.

Scarlet fever also showed a slight increase over last year as well as over the previous month, with 757 reported cases.

Tuberculosis, pulmonary, was reported in 605 instances, and *tuberculosis, other forms*, in 120 instances. This increase over the previous month seemed to come from all sections of the state and apparently was not the result of any particular survey or effort toward increased reporting.

Typhoid fever, with 36 reported cases, continues to show an unusually low figure. The deaths for the first four months of 1922 (15) are also of interest compared to the 26 deaths from this disease which occurred during the same period of 1921. If the same proportion of decrease continues throughout the year, there should be not over 70 deaths from this condition in 1922 as compared with 119, the total for 1921.

Whooping cough, with 416 cases, has increased slightly over last month, but is less than the reported incidence for the same month of last year.

RARE DISEASES.

Actinomycosis was reported from Boston, 1. *Dog-bite requiring anti-rabic treatment* was reported from Arlington, 4; Cambridge, 2; Chelsea, 2; Lexington, 2; Lowell, 11; Melrose, 1; Newton, 1; total, 23.

Dysentery was reported from Cambridge, 1; Maynard, 1; Milton, 1; total, 3.

Encephalitis lethargica was reported from Boston, 9; Brockton, 1; Brookline, 1; Chelsea, 3; Danvers, 1; Everett, 3; Fall River, 1; Foxboro, 1; Lawrence, 1; Lynn, 2; Milton, 1; New Bedford, 1; South Hadley, 1; Taunton, 1; West Springfield, 1; Worcester, 1; total, 29.

Epidemic cerebrospinal meningitis was reported from Boston, 3; Boxboro, 1; Everett, 1; Haverhill, 1; Lawrence, 1; Revere, 1; Springfield, 1; Williamsburg, 1; total, 10.

Hookworm was reported from Boston, 1.

Malaria was reported from Boston, 2; Fall River, 1; Framingham, 1; total, 4.

Pellagra was reported from Danvers, 1; Rockport, 1; total, 2.

Septic sore throat was reported from Boston, 3; Cambridge, 1; Haverhill, 1; New Bedford, 1; Topsfield, 1; total, 7.

Tetanus was reported from Leominster, 1; Salem, 1; Worcester, 1; total, 3.

Trachoma was reported from Boston, 8; East Walpole, 1; Everett, 1; Lowell, 2; Lynn, 2; total, 14.

Trichinosis was reported from Boston, 1.

THE DENVER SMALLPOX EPIDEMIC.

The *Buffalo Sanitary Bulletin* has published the details of the invasion of this western city as follows:

Denver, Colorado, is at present in the grip of a smallpox epidemic which has already cost that city three-quarters of a million dollars, has disorganized its commerce, driven out innumerable of its inhabitants and kept away every stranger who was not absolutely compelled to come.

The most remarkable part of this smallpox epidemic is its frightful mortality rate. Since January 1, according to the statements issued

by Denver's health officer, 246 cases occurred, with 81 deaths, approximately one-third. It is a long time since any smallpox epidemic with such a mortality rate has occurred, and for this reason it is worthy of special attention.

According to the last federal census Denver has a population of 256,369. Under usual conditions found in smallpox epidemics, it is quite possible that the morbidity and mortality of smallpox in Denver is even greater than indicated.

The health officer's report shows that out of this number of cases 54 had been previously vaccinated and 192 not vaccinated; 9 of the 81 deaths had previously been vaccinated, but in each instance a long period of time had elapsed, as shown by the following: One had been vaccinated 20 years ago, one 35 years ago, one 42 years ago, one 44 years ago, one 35 years ago, one 42 years ago, one 44 years ago, one 48 years ago, one 50 years ago, one 56 years ago, one 60 years ago and one 72 years ago. All the other deaths, 72 in number, had never been vaccinated.

Obituary.

CALVIN PRATT, M.D.

Dr. CALVIN PRATT of Bridgewater, who joined the Massachusetts Medical Society in 1868 and was retired in 1908, died suddenly from heart disease at his home, June 17, 1922, at the age of 80.

Dr. Pratt was born in Bridgewater March 24, 1842, son of Dr. Calvin Barton and Mary Thomas (Perkins) Pratt. He was educated in the local schools, graduating from the Bridgewater State Normal School in 1859 and from Harvard Medical School in 1866. He was a direct descendant of Phineas Pratt, one of the earliest settlers in Bridgewater; of Thomas Pratt, a passenger on the Mayflower, and of the Rev. James Keith, first minister in Bridgewater.

After serving in the Civil War as a medical cadet in the Judiciary Square Hospital in Washington, he completed his course at the Harvard Medical School and entered the Massachusetts General Hospital, where he was surgical house officer.

He was president of the board of trustees of Bridgewater Academy, and was also consulting physician at the Bridgewater State Farm, having been attending physician from 1874 to 1884.

On June 19, 1866, he married Miss Adelaide Edstrom of New York, who died a number of years ago. He is survived by a son and three daughters. Dr. John W. Pratt of Dedham, formerly superintendent of the Massachusetts General Hospital, is his brother.

Correspondence.

THE AMERICAN RED CROSS AND PUBLIC HEALTH.

Mr. Editor:

The editorial on "The American Red Cross and Public Health" in a recent number of THE JOURNAL should be read and carefully considered by every physician, as it touches upon a subject of deep interest to the members of the profession, whether engaged in private practice or in real public health work.

I must confess that I am a little surprised at the tone of opposition to the report of the Trustees of the American Medical Association, which is shown by the editorial in question, for it seemed to me that the Trustees had faced a difficult situation squarely and made a very proper recommendation. He is a brave man who ventures to oppose the Red Cross, but I believe that the situation is important enough to demand frank discussion and that those who believe in the danger of the present attitude of the Red Cross should be willing to face the situation before it is too late. It is also necessary to draw a sharp distinction between the work of the Red Cross during the war and its present work under peace conditions.

The latter, as it appears to the ordinary observer, is the subject which interests us now and is the one which I propose to discuss.

We are all aware that in many country districts there are two deficiencies: Lack of proper care for the ailing individual and lack of proper supervision of the general health of the community; these deficiencies the Red Cross proposes to supply by furnishing a community with a nurse to do what may be called district nursing and public health nursing.

At first glance this seems to be a very worthy proposal: one worthy of praise and commendation rather than of criticism and opposition; but if it is examined more carefully, I believe that its dangers will be discovered and it will be very evident that the proposed remedy simply tends to perpetuate the very evil which it pretends to cure.

We all know that many of the rural districts in Massachusetts lack the services of a resident physician and must depend for their medical care upon some physician in a neighboring town, who must drive many miles over country roads in order to visit his patient. To such a community the presence of a nurse, who can help the physician when necessary and sometimes save a visit, seems an unmixed blessing, but the transition from the position of a physician's helper to physician's substitute is very easy and the physician finds his place taken by the nurse and the patient finds that the physician, whom he has failed to call early, is loath to come at the end and wage a losing fight against neglected injury or disease. Often when the nurse has been properly trained and knows that she should not usurp the physician's functions, she is practically forced by circumstances to yield, and we all know that there are many nurses who are only too willing to act as physicians if they have the opportunity.

In either case the result is the same, the physician is not called for minor cases whether of injury or disease and is gradually crowded out and ends by striking that community off his list, so that the last stage of such a community is worse than the first. This is not an imaginary picture but has happened in rural communities in Massachusetts and will happen again unless a determined effort is made to prevent it.

In the more distinctly public health aspect of the question the picture is the same. The average rural board of health, made up as it is of untrained

men, and hampered, as all boards of health are, by lack of money, is very glad to accept the offer of the Red Cross to supply a public health nurse who will care for tuberculosis, for instance, without cost to the community and turns over, illegally, to an unofficial association one of the functions which it is, by law, charged to exercise.

One of the important problems of the day, in Massachusetts, is the improvement of the local boards of health in rural communities, but as long as they can get the work done by others without cost they will never improve, but will rather deteriorate.

It seems to me that if it is proper for the Red Cross to furnish nurses to a rural community which lacks the services of a nurse, it is also proper for it to subsidize or even employ physicians to serve those communities which lack the services of a physician.

There is plenty of work for the Red Cross to do in looking after the returned soldiers and it should confine its activities to that and leave the rural communities to stand on their own feet and gradually learn to walk alone.

FRANCIS GRO. CURRIS, Chairman,
Newton Board of Health.

ERRATUM.

June 10, 1922.

Mr. Editor:

Permit me to correct an error that appeared in the June 1st issue, on page 754, of THE JOURNAL, under "Narcotic Drug Registration."

You assert that physicians must register with the Internal Revenue Bureau under the Harrison Narcotic Act, in Classes 3 and 5. This is wrong, as medical men must register in Classes 4 and 5.

Just a little slip up, I presume!

Yours fraternally,

MAX BAFF, M.D.

The statement referred to was taken from the circular sent THE MEDICAL JOURNAL by the Internal Revenue Department. The collector now states that the printed circular was incorrectly worded and the correction noted by Dr. Baff is according to the law.—Editor.

THE GROPING LAY MIND.

The following contribution may be entitled to space in a humorous column:

"MELBOURNE, 5 May, 1922.

"The Professor of Pathology,
"University of Harvard.

"Dear Sir:

"May I, as one who deeply sympathizes with suffering humanity, express a thought which has been in my mind for some time?

"I understand that inoculation trains defending germs to attack and exterminate the germs of influenza, etc. Is it feasible that a germ might be cultivated which would attain the ability to destroy the germ of syphilis without injuring the human being?

"If a germ were discovered which showed a slight antagonism, could it be used to breed germs which in each succeeding generation would attain increased antagonism until the desired efficiency was attained?

"The enormous amount of sadness in the world which would be replaced by joy and gratitude, should such an event be consummated, is worthy of the greatest devotion of scientists to the task.

"Will you kindly do your best in the matter?

"With best wishes for success in your grand work,

"A LOVER OF HUMANITY."

NOTE.—The Professor of Pathology has not indicated any intention of taking up the education and breeding of germs of this type.—Editor.

A BENEFICENT LAW.

June 16, 1922.

Mr. Editor:

You say in the June issue, under the above caption, some years ago Massachusetts enacted a law providing for the reporting of cases of ophthalmia neonatorum. During 1921 no case of blindness resulted from this disease.

Will you please explain how you obtained your data? The Massachusetts law not only "provides" for reporting all cases, but imposes a fine for failure to report.

Nevertheless, it can hardly be claimed that all cases are reported, and if so reported how has it been possible to follow up the whole of Massachusetts, so as to know the end-results?

The writer is in thorough sympathy with the law and knows full well that appropriate treatment will save most cases from serious impairment of vision if commenced early. But appropriate treatment is well nigh impossible without specially trained eye nurses, and of these there is a very limited supply outside of the Eye and Ear Infirmary.

Massachusetts is one of the few states which does not demand the use of some silver salt as a prophylactic, and there is no disease where the value of prophylaxis is more clearly proved. Unfortunately your readers will infer that prophylaxis is of secondary importance; if simply reporting a case after the disease has become established ensures a 100 per cent. cure.

DAVID W. WELLS.

NOTE.—The statement was taken from facts supplied by the Commission for the Blind.

The contention of Dr. Wells is pertinent because the mere reporting of the case is only the first step to be taken. As soon as the report is received it has been the custom to place a specialist in association with the attending physician. While the necessary nursing care may not always be available, great improvement has resulted, therefore the law is a beneficent one.—Editor.

MASSACHUSETTS CIVIL SERVICE EXAMINATIONS FOR BACTERIOLOGIST IN THE BOSTON HEALTH DEPARTMENT.

The salary is from \$1800 to \$2000 a year. The examination is open to both men and women. Applicants must have had a medical or scientific school education, or its equivalent, and practical training in a private or public bacteriological or public health laboratory for at least two years, or have had equivalent training or experience.

The subjects of examination with their respective weights will be as follows: Training and experience (4); practical laboratory examination in bacteriology protozoology, helminthology, serology, hematology (4); practical laboratory examination in bacteriology technique (2); total (10).

Applicants will be required to obtain a mark of at least 65 per cent. in training and experience.

Successful applicants will be required to file a certificate from a reputable physician as to their physical fitness for the position.

NOTICE OF EXAMINATION FOR ENTRANCE INTO THE REGULAR CORPS OF THE UNITED STATES PUBLIC HEALTH SERVICE.

Examination of candidates for entrance into the Regular Corps of the United States Public Health Service will be held at the following-named places on the dates specified:

At Washington, D. C., July 10, 1922; at New York City, July 10, 1922; at Chicago, Illinois, July 10, 1922; at San Francisco, Cal., July 10, 1922, at New Orleans, La., July 10, 1922.

Candidates must be not less than twenty-three nor more than thirty-two years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written, and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, United States Public Health Service, Washington, D. C.

H. S. CUMMING, Surgeon General.

UNITED STATES CIVIL SERVICE EXAMINATIONS.

Toxicologist, \$3,000 to \$5,000 a year. Associate Toxicologist, \$2,500 to \$3,000 a year. Assistant Toxicologist, \$1,800 to \$2,500 a year. Receipt of applications to close July 3, 1922.

The United States Civil Service Commission announces open competitive examinations for these positions.

PATHOLOGY AND DIAGNOSIS OF TUMORS.—A course in the pathology and diagnosis of tumors will be given by Professor William H. Woglom, M.D., at the Institute of Cancer Research, 1145 Amsterdam Avenue, in connection with the summer session of Columbia University, New York, beginning on July 10, 1922, and lasting for six weeks. Classes will be held daily, except on Saturday, from 2 to 4 p. m. The fee for the course will be \$46.00. Application should be made to the Director of the Summer Session, Columbia University, New York.

DR. FRANK R. SEDGWICK has removed from Fox Hills Hospital, Staten Island, New York, to U. S. Veterans' Hospital, No. 63, St. Paul, Minnesota.

NATIONAL BOARD OF MEDICAL EXAMINERS.

The dates for the next two examinations of the National Board of Medical Examiners are as follows: Part I and II, June 19, 20, 21, 22, and 23, 1922. Part I and II, September 25, 26, 27, 28, and 29, 1922.

Applications for the June examination should be in the Secretary's office not later than May 15th, and for the September examination not later than June 1st. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1810 Medical Arts Building, Philadelphia.

EXAMINATION FOR REGISTRATION.

At the May examination of applicants for registration as physicians in Massachusetts twenty-six were examined, eleven were registered, twelve were rejected, three laid on the table for further consideration.

The medical schools represented are as follows with the tabulated results:

	Registered.	Rejected	Table.	On
Mass. Coll. Osteopathy..	1	1	1	
Middlesex Coll. M. & S.	1	4		
St. Louis Coll. P. & S..	1	3		
Geneva Med. Coll.	-	-	1	
P. & S. Boston.....	1	2		
Kentucky Sch. Med....	-	1		
Imperial Karzan	-	-	1	
Univ. Munich	1	-		
Univ. Md.	1	1		
Univ. Georgia	1	-		
Dartmouth	1	-		
Bowdoin	1	-		
Columbia Coll. P. & S..	1	-		
Univ. St. Louis	1	-		
	—	—	—	
	11	12	3	

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH.

CASES REPORTED WEEK ENDING JUNE 3, 1922.			
Disease	No. of Cases	Disease	No. of Cases
Chicken-pox	122	Pneumonia, lobar...	65
Diphtheria	112	Scarlet fever	128
Dog-bite requiring anti-rabid treatment	5	Septic sore-throat...	1
Encephalitis lethargica	1	Syphilis	32
Epidemic cerebro-spinal meningitis..	1	Suppurative conjunctivitis	10
German measles	9	Trachoma	2
Gonorrhea	78	Trichinosis	1
Influenza	4	Tuberculosis, pulmonary	125
Measles	848	Tuberculosis, other forms	26
Mumps	100	Typhoid	9
Ophthalmia neonatorum	9	Whooping-cough	60

CASES REPORTED WEEK ENDING JUNE 10, 1922.

Disease	No. of Cases	Disease	No. of Cases
Anterior poliomyelitis	1	Pneumonia, lobar ..	42
Chicken-pox	85	Scarlet fever	112
Diphtheria	98	Septic sore throat...	1
Dog-bite requiring anti-rabid treatment	6	Syphilis	31
Epidemic cerebrospinal meningitis	2	Suppurative conjunctivitis	7
German measles	20	Trachoma	2
Gonorrhœa	83	Tuberculosis, pulmonary	165
Influenza	4	Tuberculosis, other forms	37
Malaria	2	Typhoid	7
Measles	859	Whooping cough	87
Mumps	100		
Ophthalmia neonatorum	16		

SATURDAY.

9 A. M.—Operative Clinic, Mary Fletcher Hospital.

11 A. M.—Dry Clinic, Mary Fletcher Hospital.

12:30 P. M.—Lunch at Ethan Allen Club.

2 P. M.—Scientific program, Hotel Vermont, Roof Garden.

4 P. M.—Steamer Ticonderoga—Boat party to points of historic interest and rare scenic beauty on Lake Champlain.

7 P. M.—Annual dinner on board steamer Ticonderoga.

SATURDAY.

9 A. M.—Reading of papers—Hotel Vermont.

12:30 P. M.—Lunch, etc., at Hotel Vermont.

2 P. M.—Completing the scientific program.

The invitation for the 1922 meeting to be held at Burlington has been most cordially extended by the Vermont members.

No part of New England is more picturesque and more memorable in American history. No section of New England is more worthy of a largely attended meeting. So plan to make September 21 and 22 a part of your vacation.

Members are invited to prepare papers for this meeting. The title of each paper should be in the hands of the secretary on or before June 1.

P. E. TRUESDALE, Secretary.

BOOKS RECEIVED FOR REVIEW.

The JOURNAL acknowledges the receipt of the following books for review:

Influenza—Essays by Several Authors. Edited by F. G. Crookshank. Published by Wm. Heinemann (Medical Books), Ltd., London. 529 pages. Price 30s.

Advanced Suggestion. 2nd Edition. By Haydn Brown. Published by Wm. Wood & Co., New York. 402 pages. Price \$3.50.

Doctors—Entre Nous. By James Bayard Clark. Published by Medical Times Co., New York. 66 pages. Price \$1.

NOTICES.

BOSTON SANATORIUM, FORMERLY BOSTON CONSUMPTIVE'S HOSPITAL. Name changed by City Ordinance, January 18, 1922. Trustees' office, 1001 City Hall Annex. Hospital, 249 River Street, Mattapan. Men, women and children, residents of Boston, in all stages of pulmonary tuberculosis, are admitted. Patients with non-pulmonary tuberculosis are admitted when there is room for them. Apply to the Superintendent of the Hospital, Dr. A. J. White, or to the Superintendent of Nurses of the Out-Patient Department, Miss Gardner, for admission. Out-Patient Department, 13 Dillaway St., Boston. Open on Mondays, Wednesdays, Fridays and Saturdays from 9 to 11 a.m., and on Monday evenings from 7 to 9 p.m. On Saturday mornings there is a special clinic for children. Telephones: Hospital, Milton 2310; O.P.D., Beach 3430 and 2040. Milton cars from Forest Hills pass the Hospital.

NEW YORK AND NEW ENGLAND ASSOCIATION RAILWAY SURGEONS.—The thirty-second annual session of the New York and New England Association Railway Surgeons will be held at the Hotel McAlpin, Broadway and 34th Street, New York City, on Saturday, October 28, 1922, under the presidency of Dr. Donald Guthrie of Sayre, Pa. A very attractive and interesting program is being arranged for this session.